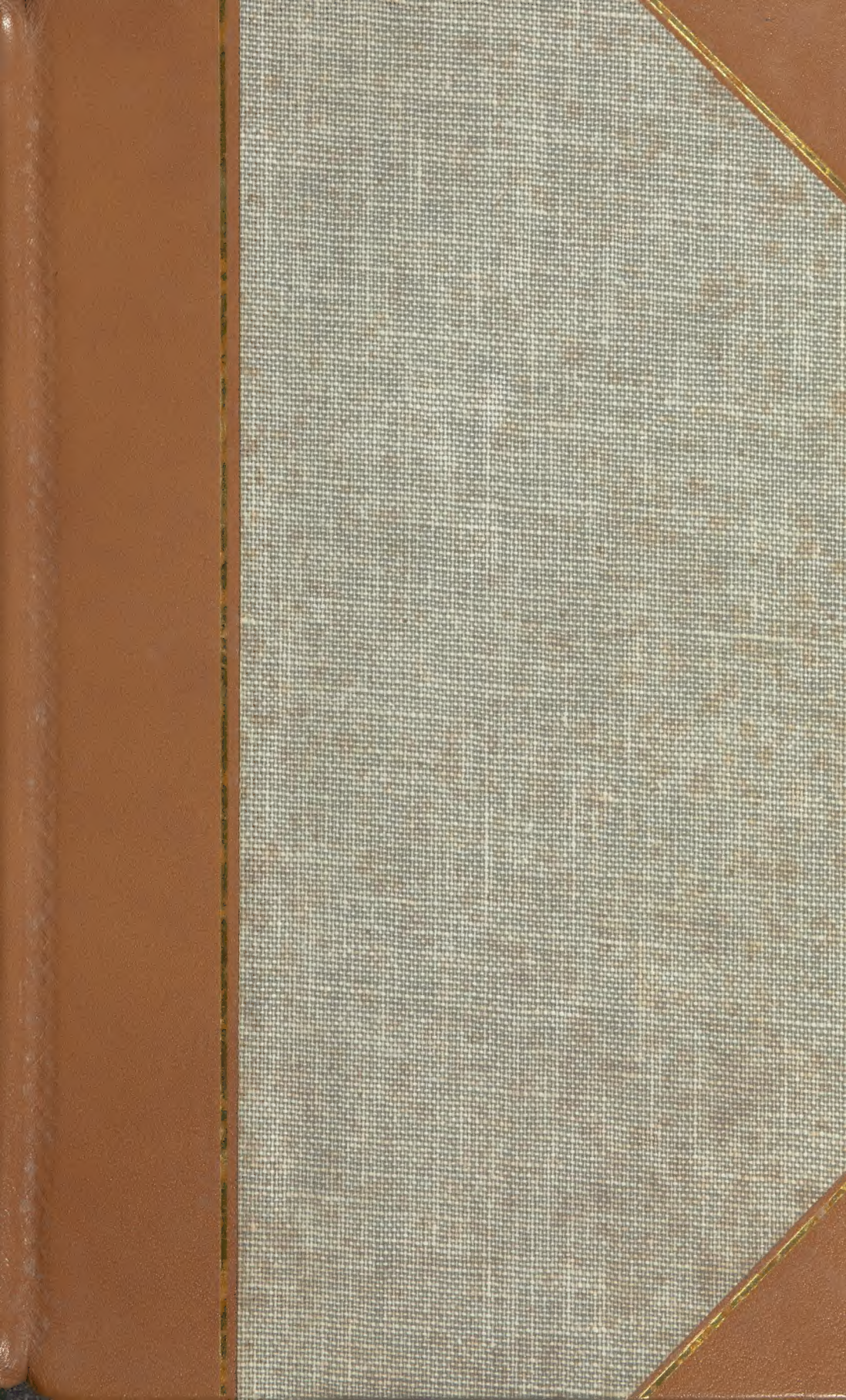






REGIÆ SOCIETATI LONDINENSI,

QUOD SCIENTIÆ SIT ET LITERARUM

NIHIL PATROCINIO SUO INDIGNUM PUTANTI,

DECIMUM HUNC

NATURÆ VIVARII

FASCICULUM,

D. D. D.

GEORGIUS SHAW,

FREDERICUS P. NODDER.

TO THE
ROYAL SOCIETY OF LONDON,
DISTINGUISHED BY ATTENTION
TO EVERY BRANCH OF SCIENCE,
THIS TENTH VOLUME
OF THE
NATURALIST'S MISCELLANY

IS
WITH THE HIGHEST RESPECT INSCRIBED.

BY
GEORGE SHAW,
FREDERICK P. NODDER.

STURNUS LUDOVICIANUS.



CHARACTER GENERICUS.

Rostrum subulatum, angulato-depressum, obtusiusculum : Mandibula superiore integerrima, marginibus patentiusculis.

Nares supra marginatæ.

Lingua emarginata, acuta.

Lin. Syst. Nat. p. 290.

CHARACTER SPECIFICUS, &c.

STURNUS griseo fuscoque maculatus, subtus flavus, linea capitis superciliisque albis, gula nigra.

Lath. ind. orn. p. 323.

STURNUS Ludovicianus.

Lin. Syst. Nat. p. 290.

ALAUDA magna.

Lin. Syst. Nat. p. 289.

In variis Americæ Septentrionalis partibus generatur avis quam depinximus, sturno vulgari paulo major. Variat coloribus. Interdum enim evenit ut cingatur

cingatur utrinque guttur linea nigra, quæ fenfim fe dilatans quasi lunulam nigram ducit trans pectus ; quæ lunula in aliis speciminibus vix ac ne vix visibilis est. Nonnullorum quoque speciminum albent remiges externi. In editione duodecima Systematis Linnæani dantur huic avi duo diversa genera, Sturni nempe et Alaudæ, ab experientia autem fati jam compertum est varietates ejusdem speciei causam fuisse erroris.



THE
CRESCENT STARLING.



GENERIC CHARACTER.

Bill strait, depressed.

Nostrils guarded above by a prominent rim.

Tongue hard and cloven.

Middle Toe united to the outmost as far as the first joint.

Lath. Synops. 2. p. 1.

SPECIFIC CHARACTER, &c.

Pale-brown STARLING spotted with dusky :
beneath yellow with black throat.

Large LARK.

Catesb. Car. 1. p. 33. *pl.* 33.

Louisiane STARE.

Lath. Syn. 2. p. 6.

Crescent STARE.

Penni. Arct. Zool. 2. p. 330.

ETOURNEAU de la Louisiane.

Buf. ois. 3. p. 192. *Pl. enl.* 256.

The bird here represented is found in several parts
of North America, and in size somewhat exceeds

the common Starling. It is subject to some variety in point of colour; the throat in some specimens being black, which descends in a dilated band beneath, so as to form a black crescent across the breast; while in others this appearance is scarce perceptible. The external tail-feathers are also white in some individuals. This bird in the twelfth edition of the *Systema Naturæ* was arranged under two different genera; viz. those of *Sturnus* and *Alauda*; but later observations have proved the varieties, which caused this impropriety, to belong to the self same species.



Am.

Pubd by T. J. Vadda, 1898.

RANA PARADOXA.



CHARACTER GENERICUS.

Corpus tetrapodum, ecaudatum, nudum.

Lin. Syst. Nat. p. 354.

CHARACTER SPECIFICUS, &c.

RANA femoribus postice oblique striatis.

Lin. Syst. Nat. p. 356.

Mus. ad. Frid. 2. p. 40.

LARVA.

Lacerta cauda ancipiti, palmis tetradactylis fissis, plantis pentadactylis palmatis, abdomine ventricoso.

Lin. Syst. Nat. ed. 6. p. 36.

RANA piscis.

Lin. Mus. Ad. Frid. 1. p. 49.

Seb. 1. p. 123. *t.* 78. *f.* 15---21.

Mer. Sur. t. 78. *f.* 1---5.

Plerisque fatis cognitum est ranam nostram vulgarem, simul atque ex ovo eruperit, gyrium esse, cauda instructum longa, complanata, pinnata, pinnulisque branchialibus utrinque a capite sitis; quæ penitus delentur cum animal plene formatum adoleverit,

rit, cauda tamen paulo diutius remanente. Prægrandem autem gyrinum ranæ, quam Linnæus *paradoxam* nominavit, e mista quadam et ambigua natura constare existimarunt nonnulli; quodque cauda carnofa piscis corpus quodammodo referat, *ranam-pis-
cem* eum vocaverunt, credideruntque fatis inepte in piscem transformari, et a pisce iterum gradatim ranam fieri. Ranam tamen veram in larva delitescere dubitabit nemo qui conformationem ejus probe examinaverit, præcipue si cum gyrinis ranarum etiam nonnullarum Europæarum comparaverit; cum illo nempe qui in Roescii historia ranarum tabula octodecima depingitur, quique non longe cedit magnitudine minoribus ranæ paradoxæ seu Surinamensis speciminibus.

Accidere solet huic, quod et gyrinis Europæis, ut pro diversa ætate vel pedes tantum posteriores, vel quatuor omnes cernantur; immo ut majorum nonnullorum speciminum, eorum nempe quæ sex aut octo uncias longitudine superant, pedes tantum posteriores appareant, cum aliorum minorum quatuor omnes pedes æque sint conspicui. Mirabilium horum animalium in Museo Britannico et Leveriano extant specimina. In Museo quoque Britannico eximium asservatur specimen ranæ ipsius integræ et perfectæ, cujus ostendit figura nostra veram magnitudinem; nec non gyrini, qui alteri tabulæ adjicitur. Patet omnino majorem esse gyrinum hujus speciei, si cum perfecto animali comparetur, gyrinis aliarum omnium ranarum quas adhuc novimus. Americam incolit australem, Surinamiam præcipue.

Existi-

Existimare videtur Gmelinius in auctiore sua editione Systematis Linnæani, caudam carnosam hujus gyrini animali etiam adulto permanere. Sed errat vir doctus; cum desit ranæ perfectæ vel minimum caudæ vestigium. Verisimile porro est non omnia magnorum gyrinorum quæ in museis continentur specimina, ad ranam paradoxam revera et singulatim pertinere; sed ad alias quasdam grandiores species, Americanas, Africanas, seu Asiaticas; ranam nempe ocellatam, marinam, aliasque.

THE
PARADOXICAL FROG.



GENERIC CHARACTER.

Body four-footed, naked, without tail.

SPECIFIC CHARACTER, &c.

FROG with the thighs streaked in an oblique direction behind.

The TADPOLE.

FROG FISH of Surinam.

Edw. Phil. Transf. v. 51. p. 653. pl. 15.

Edw. Mem. p. 30. pl. 2.

Few perhaps are unacquainted with the first form under which the common Frog appears, after its exclusion from the ovum or spawn; viz. that of a Tadpole, furnished with a long, flat, finny tail, and with ramified branchial fins on each side the head, which are obliterated when the animal has acquired its complete or perfect form; the tail still remaining some time longer. The tadpole of the frog called by Linnæus *rana paradoxa*, is of so large a size that it has been considered as a being of an ambiguous or mixed nature, and has been named the frog-fish; the



22.

Fig. 1. by J. J. N. Olden. 1898.

the fleshy appearance of the tail bearing some resemblance to the body of a fish; and from this circumstance it was presumed, by those who were ignorant of its real nature, that it gradually arrived at the state of a fish, and from thence reverted to that of a frog. That it is really no other than a frog in a larva state will be evident to every one who considers its structure; and more particularly if it be collated with the tadpole of some even of the frogs of Europe; for instance that figured on the 18th plate of Roefels' *Historia Ranarum*, where the larva does not fall very far short of the size of some of the smaller specimens of the frog-fish of Surinam. Like our European tadpoles, this animal, according to the more or less advanced state in which it is found, is furnished either with all the four legs, or with only the two hinder ones: it also sometimes happens that in the largest sized of these tadpoles, exceeding perhaps the length of six or eight inches, only the hind-legs appear, while in those of far smaller size both the fore and hind legs are equally conspicuous. Specimens of these curious animals occur both in the British and Leverian Museums: in the British Museum is also preserved a fine specimen of the complete or perfect frog, which is here represented in its natural size, as is likewise the larva or tadpole on the other annexed plate.

It will readily appear that the tadpole of this frog is larger in proportion to the complete animal than in any other species hitherto discovered. It is a native of South America, and has been principally observed in Surinam. Dr. Gmelin, in his enlarged
edition

edition of the *Systema Naturæ*, seems to suppose that the fleshy part of the tail of the tadpole still remains after the animal has acquired its complete form; but this is by no means the case: not the least vestige of that part being visible in the perfect frog.

Lastly, it may not be improper to observe that perhaps all the specimens of these very large tadpoles which occur in Museums, may not be those of the *rana paradoxa* in particular, but of some other species of American, African, or Asiatic frogs, as the *rana ocellata*, *marina*, &c. &c.

ANTIPATHES MYRIOPHYLLA.



CHARACTER GENERICUS.

Animal crescens plantæ facie.

Stirps intus cornea, spinis exiguis obfita, basi explanata, extus carne gelatinosa, verrucis polypiferis obducta.

Soland. et Ellis Zooph. p. 97.

CHARACTER SPECIFICUS, &c.

ANTIPATHES incurva ramosissima pinnata, pinnulis hinc ramosis fetaceis.

Soland. et Ellis Zooph. p. 102.

ANTIPATHES incurva ramosissima pinnataque, ramis sparsis divaricatis, pinnulis rariusculis fetaceis, hinc ramosis.

Pall. elench. zooph. p. 210.

MYRIOPHYLLUM Indicum ramosissimum.

Petiv. gaz. t. 35. f. 12.

ERICA marina tenuis.

Rumpf. amb. 6. p. 209.

In mari Indico præcipue crescit Antipathes myriophylla, magnitudine circiter pedali vel sesquipedali. Coloris est fusci vel ex flavo fusci, in diversis speciminibus plus minus saturati.

MILFOIL ANTIPATHES.



GENERIC CHARACTER.

Animal growing in the form of a plant.

Stem expanded at the base, internally horny, beset with small spines: externally covered with a gelatinous flesh beset with numerous polype-bearing tubercles.

SPECIFIC CHARACTER, &c.

ANTIPATHES with numerous, incurved, pinnated branches, with the pinnules spined on their upper side.

Yarrow-like ANTIPATHES.

Ellis and Soland. Zooph. p. 102.

The Antipathes myriophylla or Milfoil Antipathes grows principally in the Indian ocean: its height is about a foot or a foot and half. Its color is either brown or yellowish-brown, more or less deep in different individuals.



Acacia greggii (T. & G.)

PHASIANUS VARIUS.



CHARACTER GENERICUS.

Rostrum breve, robustum.

Genæ cute nuda lævigata.

Pedes (plerisque) calcarati.

Lin. Syst. Nat. Gmel. p. 737.

CHARACTER SPECIFICUS.

PHASIANUS niger, fronte rubra, collo dorsoque viridi-nitentibus, cauda compressa adscendente, tectricibus utrinque dependentibus.

Nunc primum in publicum prodit pictura formosæ hujus speciei, quæ avibus non antea descriptis videtur annumeranda. Magnitudine paulo cedit gallo communi seu gallinaceo, corpus tamen habens pro mole gracilius. Pars nuda rubra et carunculata in fronte oculos quoque amplectitur, et excurrit superius quasi in cristam planam, inferius in paleam quasi obscure bifidam. Disponuntur adeo pennæ colli dorisque anterioris, ut totidem squamas seu conchas quodammodo referant. Alarum tectrices minores lanceolatæ sunt (ut loquuntur phyfici) nigræ, flavo-aurantio marginatæ. Lanceolatæ quoque sunt

B

caudæ

caudæ tectrices utrinque dependentes, nigræ, marginibus ochraceis. Rostrum pedesque subflavent.

Quanam in patria generatur venusta hæc avis, non pro certo cognitum est; conjicimus tamen esse Indicam.



THE VARIEGATED PHEASANT.



GENERIC CHARACTER.

Bill short and stout.

Cheeks covered by a smooth naked skin.

Legs in most species furnished with spurs.

SPECIFIC CHARACTER.

Black PHEASANT, with red front, glossy-green neck and back, and compressed-ascending tail with the coverts hanging down on each side.

This beautiful bird seems to be a non-descript, of which the present figure is the first that has been presented to the public. Its natural size is somewhat inferior to that of a common Cock, and the habit or shape of the body is more slender in proportion. The carunculated or red part in front takes in the eyes, and is continued upwards into a kind of plain comb or crest, and downwards into an obscurely-divided wattle or flap. The feathers of the neck and upper part of the back are so shaped and disposed as to resemble a kind of scales or shells:

the smaller wing-coverts are black, lanceolate, and deeply edged with bright orange-yellow: the tail-coverts hang down on each side, and are also of a long, narrow, and sharpened form, and are black with ochre-coloured edges: the bill and legs are yellowish. The native country of this species is perhaps not clearly ascertained, but it is probably an Indian bird.

TUBULARIA CAMPANULATA.



CHARACTER GENERICUS.

Stirps tubulosa, simplex vel ramosa, basi affixa.

Animal terminale, capite tentaculis cristato.

CHARACTER SPECIFICUS, &c.

TUBULARIA crySTALLINA tentaculis lunatis, receptaculo simplici vel multifido-palmato.

TUBULARIA crySTALLINA.

Pall. elench. zooph. p. 85.

TUBULARIA campanulata.

Lin. Syst. Nat. p. 1303.

TUBULARIA reptans.

Lin. Syst. Nat. Gmel. p. 3835.

POLYPI cristati.

Trembl. polyph. 3. p. 209. t. 10. f. 8. 9.

Animalium minorum aquaticorum in pulcherrimis est quod in tabula depingitur tum aucta, tum naturali magnitudine. Aquas incolit puriores stagnantes, decem nempe, duodecim, seu quindecim in comuni

muni receptaculo gregatim degentibus, singulo tamen motus suos ad libitum, et sine impedimento exercente. Totam congeriem, qualis nudo oculo cernitur sine ope instrumentorum optîcorum, repræsentat minor tabulæ figura. Affigitur, ut plurimum, hæc congeries fibris radicularum in aquis immerfarum, aut caulibus plantarum aquaticarum, Lemnæ scilicet, Veronicæ Beccabungæ, aliarumque plurium. Singulo animalculo corpus est sub-cylindraceum, tubulatum, hyalinum, in tubo majore inclusum; e quo pars superior ad libitum protruditur; qui tubi majores connectuntur cum ipso receptaculo communi, gelato, nec longe absimili quasi campanulatæ vesicæ marginem habenti in segmenta aliquot truncato-tubulata incisum. Caput unicuique seu pars superior constat e membris duobus amplis, semicirculatis, tensilibus, quorum numerosissima tentacula disponuntur quasi in formam literæ *f*; expansaque similia quodammodo sunt calceamento equino. Tota conglomeratio vitreo-hyalina est; fibrarumque quaquaversum velocissime commotarum elegantem et veram proportionem nequit fideliter fati attingere ars sculptoria; non nisi ipsius animalculi intuitu plene percipiendam; cum singulis tentaculis sua et peculiaris insit pulchritudo. Tentaculorum ope gyratis quasi in vorticem aquis, varia fortasse animalcula in os facilius attrahuntur. Si subito turbantur Tubulariæ, dicto citius intra tubos majores et exteriores sese recipiunt; et horæ momento iterum extenduntur; sunt enim impatientes carceris, gaudentque, ut plurimum, membris liberis

et

et expansis; quo tempore de forma et motu generali vel nudo oculo possit judicari. Sunt præterea ea magnitudine ut non opus fit pollentibus instrumentis, sed lente tantum cujus (ut optici loquuntur) uncialis fit focalis distantia. Ut tamen singulæ partes plene et penitus examinentur, necesse omnino est microscopio uti.

Mensibus æstivis conspici possint pulcherrima hæc animalcula in variis aquis Londino adjacentibus. Inveniebantur Tubulariæ quas repræsentat tabula, Augusto mense, juxta ambulacrum Chelseanum, a falicibus *Willow-Walk* dictum; qua etiam in aqua nec non in aliis pluribus suburbanis habitat Hydra communis seu viridis.

CAMPANULATED TUBULARIA.



GENERIC CHARACTER.

Stem tubular, simple or branched, fixed by the base.

Animal terminal; the head crested with tentacula.

SPECIFIC CHARACTER, &c.

Crytalline TUBULARIA with tentacula disposed in the form of a crescent; the receptacle either simple, or more or less palmated.

Vesicular fresh-water TUBULARIA.

FEATHER-POLYPE, or Bell-Polype.

POLYPES à panache.

Trembl.

The BELL-FLOWER ANIMAL, or Plumed Polype.

Baker. Empl. for. Micr. p. 306.

pl. 12. f. 15—20.

Among the most beautiful of the smaller aquatic animals may most justly be ranked that represented on the present plate both in its natural size as well

as



as magnified. It is a native of clear stagnant waters, living in a kind of congregated manner; several individuals to the number of ten, twelve, or fifteen, inhabiting a common or general receptacle: each exerting its own voluntary motions independent of the rest. To the naked eye the whole groupe appears of the size represented by the smaller figure. It is generally attached either to the small fibres of roots projecting into the water, or to the stems of aquatic plants as Lemna, Brooklime, and others. The body of each animal is transparent, of a sub-cylindric, tubular form, and is included in a larger or exterior tube, from which the head or upper part is at pleasure protruded. The larger or exterior tubes are connected to the vesicular and somewhat bell-shaped general receptacle, which is of a gelatinous substance, and is divided at the top or border into several tubular, truncated segments. The head of the animal consists of two large, semicircular, expandible parts or organs, the tentacula of which are extremely numerous, in shape resembling an italic *f*, and, when expanded, representing in some measure the figure of an horse-shoe. The whole is of a glassy transparency, and the various flexures of the tentacula, moving with rapidity in different directions, afford a spectacle which it is not possible by any engraving to express with sufficient exactness, since nothing but an actual view of the animal can convey a genuine idea of this particular; every varying position of the tentacula displaying an elegance peculiar to itself. When disturbed they suddenly

denly withdraw into the larger or exterior tubes, and in a moment or two afterwards again extend themselves: they even seem impatient of confinement, and are commonly seen with the heads expanded, in which state their general shape and motions may be observed with the naked eye; and indeed the size of this animal is such as not to require the assistance of powerful magnifiers, but may be viewed to considerable advantage by a lens of an inch focus; though in order to examine with accuracy its several parts it is necessary to make use of a microscope.

These beautiful Zoophytes may be found during the Summer months in various waters in the neighbourhood of the Metropolis: the specimens represented on the present plate were discovered in the water by the side of the Willow-Walk at Chelsea, in which, as well as in several of the neighbouring waters, may also be found the *Hydra viridis* or common green Polype.

ANTHIAS ARGUS.



CHARACTER GENERICUS.

Caput totum squamosum ; operculo anteriore ferrato.

Bloch. ichth. 9. p. 86.

CHARACTER SPECIFICUS, &c.

ANTHIAS argenteo-cæruleus, maculis numerosis ocellaribus fuscis.

ANTHIAS maculis rotundis.

Bloch. ichth. 9. p. 95. t. 317.

Anthiæ genus instituit celeberrimus Blochius. Continentur in illo multæ species eximiæ pulchritudinis, quarum nullis cedit elegantia animal quod in tabula ostenditur, argenteo-album, partibus superioribus colore læte cæruleo obductis, maculisque annulatis seu ocellatis fuscis, quarum alba sunt centra, undique guttatum. Carent puncto albo quæ caput, pinnas pectorales, et ventrales occupant minores maculæ. De patria nihil pro certo cognitum. In longitudinem duodecim unciarum crescit Anthias Argus. In genere *Percæ* locum illi proculdubio assignasset systema Linnæanum.

THE ARGUS ANTHIAS.



GENERIC CHARACTER.

Head completely scaled: anterior gill-cover serrated.

SPECIFIC CHARACTER.

Silvery-blueish ANTHIAS, with numerous ocellated brown spots.

The genus Anthias, instituted by Dr. Bloch, contains several species of extreme beauty; of which the animal here represented is certainly one of the most elegant. Its color is a silvery white, tinged with fine blue on the upper parts, and marked all over with annular or ocellated spots of a brown color with white centres. On the head, pectoral and ventral fins, the spots are smaller and without the white centres. The native country of this fish seems unknown. It grows to about the length of a foot. In the Linnæan arrangement it would doubtless have been placed in the genus Perca.



Oct. 1, 98 M. J. Noddy.

PHALÆNA POLYPHEMUS.



CHARACTER GENERICUS.

Antennæ fetacæ, a basi ad apicem sensim attenuatæ.

Alæ (sedentis) sæpius deflexæ. (Volatu nocturno.)
Lin. Syst. Nat. p. 808.

CHARACTER SPECIFICUS, &c.

PHALÆNA alis subfalcatis griseo-flavescentibus, fascia nigricante ocelloque fenestrato, posteriorum majori, subcyaneo.

PHALÆNA alis patentibus falcatis griseo carneis, fascia atra ocelloque fenestrato, posteriorum majori.

Fabr. sp. inf. 2. p. 168.

Lin. Syst. Nat. Gmel. p. 2402.

Cram. inf. 1. t. 5. f. A. B.

In America septentrionali innascitur *Phalæna Polyphemus*. Tabula illam exprimit magnitudine naturali. Larva ejus magna, viridis, varias quercus præcipue depascitur, et in chrysalidem fusco-flavescentem convertitur.

POLYPHEMUS.

GENERIC CHARACTER.

Antennæ setaceous, decreasing in size from the base to the tip.

Wings, when at rest, generally deflected.

Flight nocturnal.

SPECIFIC CHARACTER.

PHALÆNA with subfalcated yellowish-grey wings marked by an ocellated central spot and dusky marginal band : the spot on the lower wings very large and blueish.

The *Phalæna Polyphemus* is a native of North America, and is represented on the plate in its natural size. The caterpillar, which is large and green, feeds principally on the different kinds of oaks, and changes into a yellowish-brown chrysalis.

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[illegible]

MEROPS ERYTHROCEPHALUS.



CHARACTER GENERICUS.

Rostrum curvatum, compressum, carinatum.

Lingua apice laciniata.

Pedes gressorii.

Lin. Syst. Nat. p. 182.

CHARACTER SPECIFICUS, &c.

MEROPS viridis, subtus flavicans, capite rubro,
fascia oculari nigra, gula lutea.

APIASTER Indicus erythrocephalos.

Briff. av. 4. p. 563. *t.* 44. 3. A.

MEROPS erythrocephalus.

Lin. Syst. Nat. Gmel. p. 463.

Lath. Ind. Orn. p. 274.

Adeo accurate descripsit hanc speciem celeberrimus Briffon ut ipsius auctoris verba non dubitem proferre.

“ Hanc Apiastri speciem nondum mihi videre contigit: ipsius descriptionem desumpsi ab icone ad avem ipsam depicta a Domino Poivre, et sic eam æri insculptam esse curavi.

Apiastrem Angolensem crassitie paululum superat. Ipse longitudo ab apice rostri ad caudam extremam sex circiter pollices explet, et ad extremos ungues quinque pollices et sex lineas. Rostrum ab ipso apice ad oris angulos usque sexdecim lineas longum est; cauda unum pollicem cum novem lineis; pes quinque lineas; trium digitorum anticorum medius cum ungue octo lineas, extremus septem lineas, intimus quinque cum semi lineas; posticus autem quatuor tantum lineas. Alæ complicatæ nonnihil ultra mediam caudæ longitudinem extenduntur. Caput et pars colli superior splendido imbuuntur coccineo. In utroque capitis latere tænia exstat nigra, ab exortu rostri orta, et per oculos ducta. Dorsum, uropygium, pennæ scapulares et superiores caudæ rectrices sunt eleganter virides. Guttur luteum est. Pars colli inferior, pectus, venter, latera et crura lutescunt, et paucis rubro adumbrantur. Pennæ caudam subtus obtegentes sunt quoque lutescens, sed dilute viridi marginatæ. Superiores alarum rectrices saturate virides. Remiges superne eodem viridi saturato imbutæ, interius cinereo marginatæ, subtus autem penitus cinereæ. Caudam componunt duodecim rectrices æquali longitudine pollentes, omnes subtus cinereæ; superne vero binæ intermediæ virides: laterales omnes concolores, interius cinereo marginatæ. Oculorum irides rubræ. Rostrum nigrum. Pedes cinerei; ungues vero nigricantes. Habitat in India Orientali.



Pub. No. 28472. 1888.

THE
RED-HEADED BEE-EATER.



GENERIC CHARACTER.

Bill curved, compressed, carinated, and sharp-pointed.

Tongue (generally) lacinated at the tip.

Feet grefforial.

SPECIFIC CHARACTER, &c.

Green BEE-EATER, yellowish beneath, with red head, black eye-streak, and yellow throat.

Le GUESPIER a teste rouge des Indes.

Briff. ois. 4. p. 563. *pl.* 44. *f.* 3. A.

GUEPIER a tête rouge.

Buf. ois. 6. p. 508.

This bird is most accurately described in the following manner by the celebrated Briffon.

This species of Bee-Eater I have never seen : but have taken its description from a figure drawn from nature by Monf. Poivre, and have caused it to be engraved. In size it rather exceeds the Bee-Eater of Angola. Its length from the tip of the beak to

the end of the tail is about six inches, and to the ends of the claws five inches and six lines. The beak from the tip to the angles of the mouth is sixteen lines long; the tail one inch and nine lines; the foot five lines; the middle of the three front toes together with the claw eight lines, the exterior seven lines, the interior five lines and a half; the hind toe only four lines. The wings when closed extend a little beyond the middle of the tail. The head and upper part of the neck are of a bright scarlet. On each side of the head is a black stripe, rising from the beginning of the bill, and passing through the eyes. The back, rump, scapular feathers, and upper tail-coverts are of an elegant green. The throat is yellow. The lower part of the neck, the breast, belly, sides and thighs are yellowish and shaded with a little red. The under tail-coverts also are yellowish, but edged with pale-green. The upper wing-coverts are deep-green. The quill-feathers are of the same full-green above, and within edged with ash-color, but beneath are entirely ash-coloured. The tail consists of twelve feathers of equal length, all of which are ash-coloured beneath, but the two middle ones are green above; the rest of the same color, but edged internally with ash-color. The irides of the eyes are red. The feet ash-color: the claws blackish. It is a native of the East Indies.

SEPIA OCTOPODIA.



CHARACTER GENERICUS.

Corpus carnosum : vagina excipiente pectus, ad
cujus basin tubus.

Brachia (præter bina tentacula pedunculata in ple-
risque) octo interius adspersa cirris verrucosis.

Os inter brachia, terminale, corneum.

Lin. Syst. Nat. Gmel. p. 3149.

CHARACTER SPECIFICUS, &c.

SEPIA corpore ecaudato, tentaculis pedunculatis
nullis.

Lin. Syst. Nat. p. 1095.

Lin. Syst. Nat. Gmel. p. 3149.

POLYPUS octopus.

Rondel. pisc. 513.

OCTOPODIA.

Hasselg. act. ups. 1750. p. 33.

POLYPUS pelagius.

Seb. mus. 3. p. 4. t. 2. f. 1—7.

Magna interdum huic animali moles est; major
nullibi quam in oceano Indico et Septentrionali.

Narrat

Narrat Dominus Pennantus se ab hominibus fide dignis accepisse, in certis maris Indici partibus visa interdum fuisse specimina, quorum singula brachia longa essent novem orgyias; Indosque navigium fuscipere non audere, nisi prius latis securibus instructos, ut brachia sepia cymbam prensantis possint abscindere: quod ni faciant periclitari ipsam cymbam ne sub aquis mergatur.

Lepidam historiam ex Trebio Nigro excerptit Plinius de monstro hujusmodi*, quod immodicis in receptacula commissis furtis, non levem piscatorum iram in se convertit.

“ Cætera, quæ idem retulit, monstro propiora possunt videri.

Carteia in cetariis assuetus exire e mari in lacus eorum apertos, atque ibi falsamenta populari, (mire omnibus marinis expetentibus odorem quoque eorum: qua de causa et nassis illinuntur:) convertit in se custodum indignationem assiduitate furti. Immodicæ his sepes erant objectæ: sed has transcendebat per arborem: nec deprehendi potuit, nisi canum sagacitate. Hi redeuntem circumvasere noctu, concitique custodes expavere novitatem. Primum omnium magnitudo inaudita erat: deinde color muria obliti, odore diri. Quis ibi polypum expectasset, aut ita cognosceret? cum monstro dimicare sibi videbantur. Namque et afflatu terribili canes agebat, nunc extremis crinibus flagellatos, nunc robustioribus brachiis clavarum modo incussos, ægreque multis

* *S. Loligine?*

tridentibus confici potuit. Ostendere Lucullo caput ejus, dolii magnitudine, amphorarum quindecim capax, atque, (ut ipsius Trebii verbis utar) barbas, quas vix utroque brachio complecti esset, clavarum modo torosas : longas pedum tricenûm : acetabulis, sive caliculis urnalibus, pelvium modo : dentes magnitudini respondentes. Reliquiæ asservatæ miraculo pependere pondo DCC.”

Huc forsan referenda sunt quæ vaga et incerta scribuntur de monstro Arctico, *Kraken* seu *Korven* dicto ; quod verisimile est originem duxisse ab ingentibus aliquibus hujus speciei speciminibus, in mari septentrionali visis, et in majus, ut fit, celebratis.

THE EIGHT-ARMED CUTTLE-FISH.



GENERIC CHARACTER.

Body fleshy, sheathing the breast, which is furnished at its base with a tubular opening.

Arms eight, (and in most species two pedunculated tentacula,) beset with numerous suckers or acetabula.

Head short; *Eyes* large; *Mouth* resembling a Parrot's beak.

SPECIFIC CHARACTER, &c.

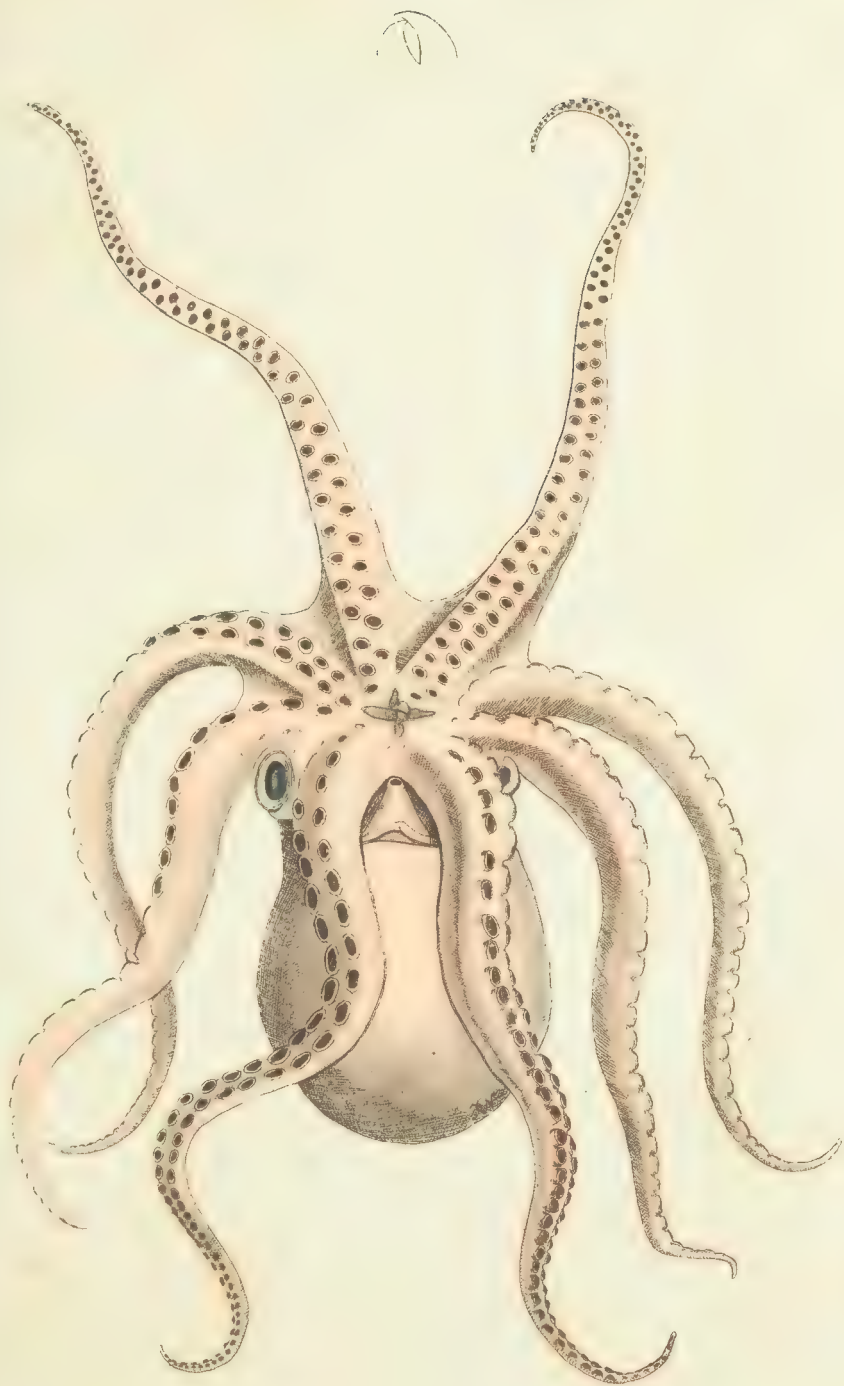
Short-bodied CUTTLE-FISH, without any tail or appendage; with eight arms and no tentacula or longer arms.

The SEA POLYPUS.

The eight-armed CUTTLE-FISH.

Penn^t. Br. Zool. 4. p. 44. *pl.* 28.

The size to which this animal sometimes grows is very great; but it is in the Indian and Northern seas that it seems to arrive at its fullest magnitude. Mr. Pennant tells us he has been well assured that in
some



some parts of the Indian seas, specimens have been seen with each arm of the length of nine fathoms; and that in those seas the Indians never venture to navigate their canoes or boats without being provided with broad hatchets in order to cut off the arms of the cuttlefish, should it happen to attack the vessel, which it sometimes does in such a manner as greatly to endanger its being drawn under water.

A most entertaining account is given by Pliny, from Trebius Niger, of an enormous monster of this kind (perhaps a *Loligo*), near the coast of Carteia, which used to rob the neighbouring reservoirs of salted fish, and which continued its depredations in so alarming a manner as to provoke the vengeance of the enraged proprietors.

This tale, in the translation of honest Philemon Holland, runs thus.

“ The rest which mine author hath related as touching this fish, may seem rather monstrous lies and incredible, than otherwise: for he affirmed, that at Carteia there was one of these *Polypi*, which used commonly to go forth of the sea, and enter into some of their open cisterns and vaults among their ponds and stewes, wherein they kept great sea-fishes, and otherwhiles would rob them of their salt-fish, and so go his waies againe: which he practised so long, that in the end he gat himselfe the anger and displeasure of the masters and keepers of the said ponds and cisterns, with his continuall and immeasurable filching: wherupon they staked up the place and empalled

palled it round about, to stop all passage thither. But this thiefe gave not over his accustomed haunt for all that, but made meanes by a certaine tree to clamber over and get to the fore-said salt-fish; and never could he be taken in the manner nor discovered, but that the dogges by their quicke sent found him out and bayed at him: for as he returned one night toward the sea, they assailed and set upon him on all sides, and therewith raised the foresaid keepers, who were affrighted at this so sodaine an alarme, but more at the straunge sight which they saw. For first and foremost this Polype fish was of an unmeasurable and incredible bignesse: and besides, hee was besmeared and beraied all over with the brine and pickle of the foresaid salt-fish, which made him both hideous to see to, and also to stinke withall most strongly. Who would ever have looked for a Polype there, or taken knowledge of him by such markes as these? Surely they thought no other, but that they had to deale and encounter with some monster: for with his terrible blowing and breathing that he kept, he drave away the dogges, and otherwhiles with the ends of his long stringed winding feet, he would lash and whip them; sometimes with his stronger clawes like armes he rapped and knocked them well and surely, as it were with clubs. In summe, he made such good shift for himselfe, that hardly and with much adoe they could kill him, albeit he received many a wound by trout-speares which they launced at him. Well, in the end his head was brought and shewed to Lucullus for a wonder,

der, and as bigge it was as a good round hoghead or barrel that would take and containe 15 Amphores: and his beards (for so Trebius tearmed his clawes and long-fringed feet) carried such a thicknes and bulke with them, that hardly a man could fathom one of them about with both his armes, such knockers they were, knobbed and knotted like clubs, and withall 30 foot long. The concavities within them, and hollow vessels like great basons, would hold four or five gallons apeece: and his teeth were answerable in proportion to the bignes of his bodie. The rest was faved for a wonder to be seen, and waighed 700 pound weight.”

It may be added that the vague and uncertain descriptions of the northern animal called the Kraken or Korven, may perhaps owe their origin to exaggerated accounts of some uncommonly large specimens of this animal seen in the northern seas.



PAPILIO LEILUS.



CHARACTER GENERICUS.

Antennæ apicem versus crassiores, sæpius clavato-capitatae.

Alæ (sedentis) erectæ sursumque conniventes (volatu diurno.)

Lin. Syst. Nat. p. 744.

CHARACTER SPECIFICUS, &c.

PAPILIO alis caudatis concoloribus nigris, fascia lineisque viridibus nitentibus numerosis.

Lin. Syst. Nat. p. 750.

Eq. Achiv.

Merian. Sur. t. 29.

Seb. musf. 4. t. 36. *f.* 1. 2. 3. 4.

Cram. 8. t. 85. *f.* E. F. G. C. D.

Multas Americæ meridionalis partes nec non insularum Americæ adjacentium incolit pulcherrimum hoc insectum. Coloribus aliquatenus variat. Specimina nempe ab insulis delata plus habent coloris aureo-cuprei, minus autem leviter cærulei, in alarum oris. Futuris forsan physicorum disquisitionibus

bus poterit probari, insecta insularia et Americana
revera specie differre, quamvis eadem fere sit utrif-
que facies, et affinia admodum sibi invicem videan-
tur. Larvam seu erucam prima omnium descripsit
Domina Merian, quæ asserit setas longas crassasque
quibus obtegatur vix ac ne vix duritie cessisse totidem
filis ferreis. Larva gramineo-viret; chrysalis fusca
est, nigro maculata.



LEILUS.



GENERIC CHARACTER.

Antennæ thickening towards the upper part and generally terminating in a knob.

Wings (when fitting) erect and meeting upwards.
(Flight diurnal.)

SPECIFIC CHARACTER, &c.

Caudated black BUTTERFLY, with shining-green band and numerous narrow stripes: both surfaces of the wings nearly similar in color.

Merian's Surinam Insects. pl. 29.

Kleeman inf. 1. pl. 2. f. 1.

Aubert Pl. Enl. 71. f. 1.

This beautiful Insect is a native of many parts of South America, as well as of some of the West Indian islands. It admits of some variety in point of colors: the West Indian specimens having more of the coppery or gilded tinge, and less of the pale-blue on the edges. Future observations may also prove that the two kinds may in reality differ from each

each other, though so extremely nearly allied in their general appearance. The caterpillar or larva was first described and figured by Madam Merian, who assures us that the long and thick bristles with which it is beset are nearly as strong as iron wires : it is of a green color ; and the chrysalis is brown, spotted with black.

TURBO PETHOLATUS.



CHARACTER GENERICUS.

Animal Limax.

Testa univalvis, spiralis, solida.

Apertura coarctata, orbiculata, integra.

Lin. Syst. Nat. p. 1232.

CHARACTER SPECIFICUS, &c.

TURBO testa imperforata ovata lævi nitida, anfractibus sursum subangulatis.

Lin. Syst. Nat. p. 1233.

COCHLEA petholata.

Rumpf. t. 19. *f.* D. & 5. 6. 7.

COCHLEA variegata.

Argenv. Conch. t. 6. *f.* K.

List. Conch. t. 584. *f.* 39.

Gualt. test. t. 64. *f.* F.

Klein. ostr. t. 2. *f.* 51.

Maria Indica et Americana incolit Turbo petholatus, magnitudine vera in tabula depictus.

THE
V A R I E G A T E D T U R B O .



GENERIC CHARACTER.

Animal snail-shaped.

Shell univalve, spiral, solid.

Aperture orbicular.

SPECIFIC CHARACTER, &c.

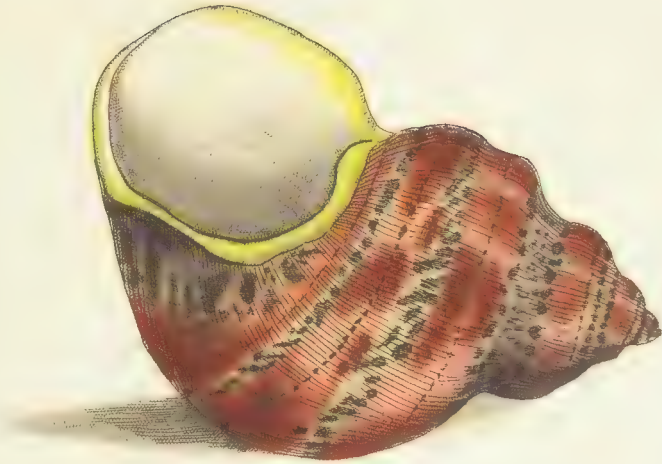
TURBO with ovate glossy variegated shell; the
whirls inclining to an angular form on the
upper part.

The variegated TURBO.

The ribband TURBO.

The parti-coloured American SNAIL.

This elegant shell is a native of the Indian and
American seas, and is represented on the plate in its
natural size.



FRINGILLA TRISTIS.



CHARACTER GENERICUS.

Rostrum conicum, rectum, acuminatum.

Lin. Syst. Nat. p. 317.

CHARACTER SPECIFICUS, &c.

FRINGILLA flava, fronte nigra, alis fuscis.

Lin. Syst. Nat. p. 320.

Lin. Syst. Nat. Gmel. p. 907.

CARDUELIS Americana.

Briss. av. 3. p. 64.

Edw. av. t. 274.

Fringilla tristis quam magnitudine vera repræsentat tabula in variis Americæ Septentrionalis partibus conspicitur. Femina supra olivacea, caret fronte nigra.

THE
AMERICAN GOLDFINCH.



GENERIC CHARACTER.

Bill perfectly conic, slender towards the end, and very sharp-pointed.

SPECIFIC CHARACTER, &c.

Yellow FINCH, with black front and wings.

American GOLDFINCH.

Edw. pl. 274.

Le CHARDONNERET jaune.

Buf. ois. 4. p. 212.

Pl. enl. 202. f. 2.

Golden FINCH.

Penn't. Arct. Zool. p. 371.

The American Goldfinch, which the plate represents in its natural size, is found in various parts of North America. The female is olive-coloured above, and wants the black spot on the front.



GASTROBRANCHUS CÆCUS.



CHARACTER GENERICUS.

Spiracula duo ventralia.

Bloch. ichth. 12. append. p. 50.

CHARACTER SPECIFICUS, &c.

GASTROBRANCHUS oculis carens.

Bloch. ichth. 12. append. p. 51.

MYXINE glutinosa.

Lin. Syst. Nat. p. 1080.

Lin. Syst. Nat. Gmel. p. 3082.

Mus. Ad. Frid. 1. p. 91. t. 8. f. 4.

Myxines glutinosæ nomine vermibus adjunxit Linnæus animal in tabula depictum, a Blochio rectius piscibus annumeratum, instituto ei novo genere, quod dicitur *Gastrobranchus*. Mirum est Linnæum aliosque phyficos ab hoc non discriminaſſe *Lampetram cæcam Willughbeii*; quam quoque repræſentari ab effigie quæ exſtat in Pennanti Zoologia Britannica exiſtimat Blochius, nequaquam vero *Gastrobranchum* noſtrum, ſeu veram *Myxinem glutinoſam* Linnæi. Longum eſſe *Gastrobranchum* ſeu *Myxinem* paucas uncias tradunt Linnæus aliiſque.

In Museo tamen Britannico conspici possit specimen fere æquale mediocri anguillæ; et in celeberrimi Josephi Bankfii pinacotheca, in qua nempe reponuntur icones animalium australium, depingitur Gastrobranchus communi anguillæ certe non minor. Verisimile est igitur magnitudine multum variare, et Europeis longe majora esse antarctica specimina. Adeo glutine abundat mirum hoc animal, ut aquam marinam gelatam brevi reddat. Generatur in maribus tum septentrionalibus tum australibus. Privatur omnino oculis: quod fortasse Linnæum aliosque in errorem duxit, quibus nihil differre visum est inter hoc et Lampetram cæcam Willughbeii. Lampetræ tamen non desunt prorsus oculi licet minimi sint. Plane igitur constat genus *Myxenem* a vermibus debere ablegari; supra enim vidimus ad pisces referendum esse, ad pisces nempe cartilageos, five *nantes* Linnæi.

Figura secunda monstrat partem anticam dissectam et apertam, ut de formatione duplicis seriei dentium, nec non de simplici dente curvato in medio palati superioris melius et commodius possit inquiri.





THE GLUTINOUS GASTROBRANCHUS.



GENERIC CHARACTER.

Mouth terminal, furnished with cirri or beards.

Teeth in a double pectinated row on each side:

Upper tooth single, sharp, in the roof of the mouth.

Body anguilliform, carinated beneath by a soft fin.

Two *Ventral Spiracula*.

SPECIFIC CHARACTER, &c.

Eel-shaped GASTROBRANCHUS without eyes.

The Glutinous HAG.

Penn. Zool. Brit. 4. p. 33.

The HAG-FISH, or Slime-Worm.

Der BLINDFISCH.

Bloch. ichth. t. 413.

The animal which forms the subject of the present plate was by Linnæus ranked amongst the *Vermes*, under the title of *Myxine glutinosa*. Dr. Bloch however has with great propriety given it its true rank

rank amongst Fishes, and has instituted for it the genus *Gastrobranchus*. It is remarkable that a very different animal has by Linnæus and others been confounded with it : viz. a small species of *Petromyzon* or Lamprey ; (*Lampetra cæca*. Will. ichth.) The figure also in the British Zoology is, according to Dr. Bloch, by no means the *Gastrobranchus*, (*Myxine glutinosa*, Lin.) but the above-mentioned small species of *Petromyzon*. Linnæus and others have also described the *Gastrobranchus* (*Myxine*) as seldom exceeding the length of a few inches ; yet in the British Museum is a specimen not less than a middle-sized eel : and in a collection of drawings of South-Sea animals in the possession of Sir Joseph Banks, a figure occurs of the same animal at least as large as a common eel. We may therefore conclude that it varies very greatly in size, and that the European specimens fall far short of the Antarctic ones. When placed in a vessel of sea water this fish soon renders it gelatinous, being of an uncommonly glutinous nature. It is found in the Mediterranean and the northern seas, as well as in those of the southern hemisphere. It is entirely destitute of eyes, which seems to have been the reason of Linnæus and others having confounded it with the *Lampetra cæca* of Willughby above mentioned, in which fish however there are eyes, though very small ones.

It must be unnecessary to add that the genus *Myxine* amongst the Vermes must be now exploded ; the animal belonging, as we have seen, to the division of Cartilaginous Fishes, or *Nantes* of Linnæus.

The

The second figure represents the fore-part of the animal opened, in order to shew the structure and situation of the double rows of teeth ; as well as the single curved tooth in the middle of the roof of the mouth.

SEPIA LOLIGO.

CHARACTER GENERICUS.

Corpus carnosum: vagina excipiente pectus, ad
cujus basin tubus.

Brachia (præter bina tentacula pedunculata in ple-
risque) octo interius adspersa cirris verrucosis.

Os inter brachia, terminale, corneum.

Lin. Syst. Nat. Gmel. p. 3149.

CHARACTER SPECIFICUS, &c.

SEPIA corpore subcylindrico subulato, cauda an-
cipiti-rhombea.

Lin. Syst. Nat. p. 1096.

LOLIGO.

Rond. pisc. 506.

LOLIGINIS species maxima.

Seb. Mus. 3. p. 7. t. 4.

In magnam Interdum crescit molem Sepia Loligo;
minor tamen est Sepia octopodia; a qua etiam facile
fecernitur corpore magis elongato. Suppeditavit
huic Natura nec non aliis nonnullis congeneribus
receptaculum magnum internum, foramine extrin-
fecus

secus aperto: continetur in hoc facculo fluidum quoddam nigrum et spissum, quo, si turbata sit, statim emisso, aquam infuscare, et e conspectu fugere dicitur. Utebantur antiqui hoc succo, atramenti vice: putatque celeberrimus Swammerdamus atramentum Sinenſe seu quod Indicum vulgo dicitur, ex hoc ipſo liquore spissato concoqui, additis certis suffimentis, aliisque ejusmodi. Affirmant contra nonnulli succum, quem emittit Loligo, in atramentum scriptorium apte et utiliter non posse converti; et ut aliquid ejus ope plane et probe literis mandetur, summa peritia opus esse. Quibus fortasse assentiendum sit, si liquor recens fuerit extractus: sed si prius satis exsiccat, contritus fuerit et in aqua solutus, de calamo facilius dilabetur; et probabile omnino videtur quod opinatur Swammerdamus; præcipue cum certum sit atramenti Indici modicam quantitatem, si post solutionem in vase aliquo servetur, intra paucos dies foetorem non levem emittere; quod satis indicare videtur animalem originem.

Prædatoria est indole Sepia Loligo, ut et aliæ congeneres; vesciturque præcipue testaceis et molluscis variis. Color generalis fusco-rubet, oculis læte cæruleis. Non prorsus supervacaneum sit notare Sepias ab antiquis Polypos fuisse dictas; polyposque parvulos aquaticos, quos Hydras hodie nuncupant phyfici, facie seu habitu generali sepiis quodammodo similes esse; consperguntur enim hydrarum tentacula verrucis pluribus quæ visibiles sunt ope microscopii, quasque verisimile est eodem fungi munere quo sepiarum acetabula. Addendum porro est, vice ossis quod sepia officinalis seu communis in corpore habet,

bet, instrui hanc speciem cartilagine quadam eniformi, hyalina, longa; quæ a quibusdam physicis quasi species Pennatulæ descripta et depicta est; a Seba nempe in tertio volumine thesauri rerum naturalium p. 40. tab. 16. In editionibus quoque nonnullis prioribus systematis naturæ Linnæani, falso reponebatur in genere Pennatulæ.

THE CALAMARY.



GENERIC CHARACTER.

Body fleshy, sheathing the breast, which is furnished at its base with a tubular opening.

Arms eight, (and in most species two pedunculated tentacula,) beset with numerous suckers or acetabula.

Head short; *Eyes* large: *Mouth* resembling a Parrot's beak.

SPECIFIC CHARACTER, &c.

SEPIA with subcylindric subulate body and flattish sharp-edged rhomboid tail.

The CALAMARY or Ink-Fish.

The INK-SEPIA or Loligo.

The Ink CUTTLE-FISH.

This species is readily distinguished from the S. octopodia or eight-armed Cuttle-Fish by its more elongated form: in size it is inferior to that animal, though sometimes seen of a very considerable magnitude.



nitude. It is provided, like some others of this genus, with a large receptacle or internal pouch containing a peculiar secretion or fluid of a black color and of a thickish consistence, and opening outwardly by a tubular foramen. When pursued it ejects a quantity of this fluid, which mixing with the surrounding water, is supposed to facilitate the escape of the animal by concealing it from view. This liquor appears to have been used by the ancients for the purpose of ink. The sagacious Swammerdam also declares himself of opinion that the celebrated compound formed by the Chinese, and commonly termed Indian ink, is no other than the black fluid before mentioned in an inspissated state, with the addition of certain perfumes, &c. By others however it is affirmed that the liquor of the *Loligo* is not very convenient for the purpose of an ink, and requires a considerable degree of dexterity in its use. This perhaps may be the case with the recent liquor, but when dried and again ground or dissolved in water, it may become much more easily manageable, and it should seem that Swammerdam's theory may be highly probable; more especially as Indian ink dissolved in water and kept in any considerable quantity, in the space of a few days acquires a very high degree of fœtor, which clearly seems to indicate an animal substance. Like the rest of the *Sepiæ*, the *Loligo* is of a very predacious nature, and feeds on Shell-fish and various Mollusca. Its general color is a reddish brown: the eyes of a beautiful blue. It may not be improper to observe that the different species of this genus were the *Polypi* of

of the ancients, and it is also highly probable that the small fresh-water animals called Hydræ or Polypes in modern natural history, are considerably allied in general habit to the Sepiæ, and their arms or tentacula when microscopically examined, seem beset with numerous verrucæ which probably act in the same manner as the acetabula or suckers on those of the Sepiæ. It may also be observed that the Loligo, instead of the friable calcarious bone with which the common or officinal Cuttle-Fish is furnished, has on the contrary a long, lance-shaped, transparent cartilage in place of the bone; and this cartilage has sometimes been described and figured as a species of pennatula, under which name it may be found in the third volume of Seba's Thesaurus, p. 40. pl. 16. and even in some of the earlier editions of the Systema Naturæ of Linnæus it was erroneously placed under that genus.

MONOCULUS PULEX.

CHARACTER GENERICUS.

Pedes natatorii.

Corpus crusta tectum.

Oculi (plerisque) approximati, testæ innati.

Lin. Syst. Nat. p. 1057.

CHARACTER SPECIFICUS, &c.

MONOCULUS antennis dichotomis, cauda inflexa.

Lin. Syst. Nat. p. 1058.

PULEX aquaticus.

Schaeff. monogr. t. 1. f. 1—8.

Daphnia PULEX.

Mull. zool. dan. prod. 2400.

In stagnis fere omnibus generatur Monoculus Pulex. Interdum fit ut ipsæ aquæ ab animalculorum numero rubescant. Movetur quasi subsultim; quam ab causam magnitudini adjectam, antiquioribus nonnullis phycis placuit pulicem aquaticum nominare. Si microscopio examinetur, vix ullis cedit monoculis vel pulchritudine vel singulari partium conformatione; cumque pellucida sit testa, evidenter
apparent

apparent membra quoque interna. Oviparum est animalculum, et in ipso parente inclusa ova non raro datur contemplari. Depingitur in tabula tum vera magnitudo, tum aucta. Variat color; interdum fere albidus, seu ex albido flavescent: interdum fuscus, vel rubro-saturatior. Est etiam ubi subviret.

ERRATUM.

Page 14 of this Sheet, first line, for *probable* read *remarkable*.



Pub. d. Dec. 98 by R. L. Voder.

THE FLEA MONOCULUS.



GENERIC CHARACTER.

Feet formed for swimming.

Body covered by a crustaceous shell.

Eyes (in most species) approximated.

SPECIFIC CHARACTER, &c.

MONOCULUS with dichotomous antennæ and inflected tail.

The Flea MONOCULUS or Water-Flea.

The WATER-FLEA with branched horns.

Baker. Empl. for Micr. p. 302.

pl. 12. f. 14.

The Monoculos Pulex, one of the most elegant species of this genus, is an inhabitant of almost every stagnant water, in which it is sometimes so very numerous as to diffuse a reddish tinge through the whole body of the water. The size of this animal, with its starting kind of motion, has induced many of the more ancient writers on natural history to call it by the title of the water-flea. Few of the Monoculi can exceed it in the beauty and singularity of

its appearance when microscopically examined ; the transparency of the shelly covering admitting a most admirable view of the several internal parts. This animal is viviparous, and it frequently happens that the included eggs may be plainly perceived while contained within the parent animal. In the plate it is represented moderately magnified, as well as in its natural size. In color it varies, being sometimes merely whitish or very pale yellowish-brown ; at other times brown, or even strongly tinged with red, and sometimes it is found of a greenish hue.

ORIOLOUS HÆMORRHIOUS.

CHARACTER GENERICUS.

Rostrum conicum, convexum, acutissimum, rectum: mandibula superiore paulo longiore, obsolete emarginata.

Lingua bifida, acuta.

Pedes ambulatorii.

Lin. Syst. Nat. p. 160.

CHARACTER SPECIFICUS, &c.

ORIOLOUS niger, rostro flavo, uropygio phœniceo.

ICTERUS niger, uropygio coccineo.

Briss. av. 2. p. 98. t. 8. f. 2.

ORIOLOUS hæmorrhous.

Lin. Syst. Nat. Gmel. p. 387.

Merulæ vulgari magnitudine æqualis Oriolus hæmorrhous in America meridionali generatur; illumque a congeneribus discriminat plaga læte phœnicea, qua decoratur pars dorsi inferior, cum reliqua avis nigret, rostro flavo-pallente excepto.

THE
RED-RUMPED ORIOLE.



GENERIC CHARACTER.

Bill conic, convex, very sharp-pointed, strait: the upper mandible rather longer than the lower and slightly emarginated.

Tongue bifid, sharp-pointed.

Feet formed for walking.

SPECIFIC CHARACTER, &c.

Black ORIOLE, with yellow bill and crimson rump.

Red-rumped ORIOLE.

Lath. syn. 1. p. 420.

Le CASSIQUE rouge.

Briss. orn. 2. p. 98. *pl.* 8. *f.* 2.

Le CASSIQUE rouge du Bresil.

Buf. ois. 3. p. 238. *Pl. enl.* 482.

This species, which is about the size of a black-bird, is a native of South America: it is readily distinguished from the rest of its congeners by the rich



rich and vivid crimson which adorns the lower part of the back, while all the rest of the bird is of a deep glossy black, except the bill, which is of a pale yellow.

SCIÆNA CIRROSA.



CHARACTER GENERICUS.

Squamæ arcte adhærentes.

Caput squamofum.

Dorsum dipterygium.

Bloch. ichth. 9. p. 27.

Thoracici.

CHARACTER SPECIFICUS, &c.

SCIÆNA flavescens, fubtus fubargentea, lineis longitudinalibus obliquis nigricantibus, mento barbato.

SCIÆNA cirrofa. S. maxilla superiore longiore, inferiore cirro unico.

Lin. Syst. Nat. p. 481.

SCIÆNA cirro mentali.

Bloch. ichth. 9. p. 41. t. 300.

Præcipuam distinctionis notam in Sciæna genere docuit Linnæus esse fossulam quandam dorsualem in longitudinem ductam, in qua quiescere ad libitum posset pinna dorsi, et quasi abscondi. Blochio autem,

tem, qui compertum habuit non modo evidentiore
esse hanc notam in aliis multis piscibus, sed et ma-
jori parti etiam Sciænarum Linnæanarum omnino
desse, visum est alium characterem genericum seli-
gere. In pulcherrimis merito habetur species quæ
in tabula depingitur. Maria incolit Europæa et
Americana, quasi pedali ut plurimum longitudine.



Pubd. by J. J. Nodder Jan. 1799.

THE
BEARDED SCIÆNA.



GENERIC CHARACTER.

Scales strongly fixed.

Head scaled.

Back with two fins.

Thoracici.

SPECIFIC CHARACTER, &c.

Yellowish SCIÆNA, subargenteous beneath, with longitudinal blackish stripes, and a cirrus or beard on the under jaw.

L'UMBRE.

Rond. Hist. de Poiss. p. 120.

Will. ichth. p. 299. t. p. 19.

The genus Sciæna was characterized by Linnæus principally from the circumstance of a sort of longitudinal cavity or *fossula dorsalis* into which the back fin might occasionally be so far depressed as to be in a manner concealed from view. Dr. Bloch however has observed that this character, exclusive of its being found in a more striking degree in several

several other fishes, does by no means pervade the major part even of the Linnæan Sciænæ themselves; many of which are destitute of it. Dr. Bloch therefore has taken the generic character from a different circumstance. Among the most elegant species may be numbered that represented on the plate. It is a native of the European and American seas, and is commonly found of about a foot in length.

RANA BICOLOR.



CHARACTER GENERICUS.

Corpus tetrapodum, ecaudatum, nudum.

Lin. Syst. Nat. p. 354.

CHARACTER SPECIFICUS, &c.

RANA supra cærulea, subtus ochracea, pedibus fissis, digitis orbiculato-dilatatis.

RANA pedibus fissis, palmis tetradactylis, plantis pentadactylis, omnibus orbiculato-dilatatis, superne cyanea, inferne fulva.

Schloff. & Boddaert. de ran. bicol. p. 19.

RANA bicolor.

Lin. Syst. Nat. Gmel. p. 1052.

In Africa? generatur animal cujus veram magnitudinem ostendit tabula, non tam formæ elegantia infigne quam colorum. Pedes similes fere pedibus ranæ arboreæ; singulis nempe digitis orbiculato-dilatatis et complanatis. A Domino Schloffer primum

mum descripta est hæc species, qui adjecit quoque
descriptioni præstantem iconem. Jactat Museum
Britannicum eximium specimen unde depicta est
hæc nostra figura.



THE
BLUE-AND-YELLOW FROG.



GENERIC CHARACTER.

Body four-footed, naked, without tail.

SPECIFIC CHARACTER, &c.

Blue FROG, ochre-coloured beneath; with unwebbed feet, and flattened orbicular toes.

Blue-and-yellow FROG.

This animal, more remarkable for the elegance of its colors than its form, is a native of Africa? and is represented in its natural size on the annexed plate. The feet are formed nearly in the same manner as those of the rana arborea or tree frog; the toes being of a flattened orbicular shape. This species was first described by Dr. Schloffer, who has accompanied his description by an excellent figure. The representation here given is from a fine specimen in the British Museum.

MONOCULUS APUS.



CHARACTER GENERICUS.

Pedes natatorii.

Corpus crusta tectum.

Oculi (plerisque) approximati, testæ innati.

Lin. Syst. Nat. p. 1057.

CHARACTER SPECIFICUS, &c.

MONOCULUS testæ convexa, antice rotundata,
postice truncata, cauda bifeta.

APUS cancriformis.

Schæff. monogr. t. 1—6.

MONOCULUS Apus.

Lin. Syst. Nat. p. 1058.

BINOCULUS palustris.

Müll. zool. dan. prodr. 2047.

LIMULUS palustris.

Müll. entomofst. p. 127.

Inter Monoculos Europæos quasi gigas eminent
Monoculus apus: manifesta omnino sunt tum bran-
chiæ tum alia membra, quæ adeo exigua habent
minores

minores congeneres, ut non nisi microscopii ope possint discerni. Genus Linnæanum *Monoculus* dictum disperferunt Fabricius, Geoffrius, Mullerus, et alii nonnulli in varia genera, ab oculis diversæ sitis; qui in aliis adeo appropinquant, ut unicus oculus videatur.

Fatendum sane est Monoculi titulo species aliquas minus feliciter designari. Cum tamen eadem fere aut saltem similis sit generalis partium conformatio, melius visum est Linnæano nomine jam olim recepto genus distinguere, quam novis generibus, quæ paulo licentius instituisse videntur hodierni entomologi, lectorum animis dubitationem injicere.

Subvirens, ut plurimum, *Monoculus* apus, interdum subrubet, aut fusco-pallet. Rara hæc species, si cum aliis comparetur, quærenda est in stagnis majoribus, et aliis ejusmodi locis. Tabula eam ostendit vera magnitudine. In Actis Anglicis proba exstat hujus insecti effigies a Kleinio descripti, qui specimen Germanicum examinaverat; cui descriptioni adjicitur quoque historia ejusdem animalculi copiosissime reperti in magna aqua apud *Bexly common* in agro Cantuariensi; quam aquam penitus exsiccatam cum subito restituisset pluvia tonitralis, duorum dierum spatio dicitur ingentes iterum occupasse eorundem insectorum catervas.



THE
CANCROID MONOCULUS.



GENERIC CHARACTER.

Feet formed for swimming.

Body covered by a crustaceous shell.

Eyes (in most species) approximated.

SPECIFIC CHARACTER, &c.

MONOCULUS with convex shell rounded in front, truncated behind: the tail furnished with two bristle-shaped processes.

Le BINOCLE à queue en filets.

Geoff. Hist. abr. 2. p. 660. *pl.* 21. *f.* 4.

INSECTUM aquaticum, &c.

Phil. Transf. vol. 40. p. 150, &c.

pl. 1. *f.* 2.

This curious insect is by far the largest of all the European Monoculi; exhibiting with great distinctness the numerous branchiæ and other parts which in the smaller species are only to be viewed by the assistance of the microscope. The Linnæan genus *Monoculus* has by Fabricius, Müller, and others
been

been subdivided into different genera on account of the disposition of the eyes, which in some species are approximated, so as to appear as if single, while in others they are remote from each other. It must be confessed that the title *Monoculus* is, with respect to many of the species, rather an unfortunate one; yet since the insects which Linnæus has arranged under the genus agree sufficiently in the general structure of their several parts, it seems better to continue it as it first stood, than to create confusion by the unnecessary institution of new genera; a fault which seems to be prevailing among modern entomologists. The *Monoculus apus* is generally of a greenish cast, and sometimes of a reddish or pale brown. It is rare in comparison with many other species, and is found in large ponds and other stagnant waters. The plate represents it in its natural size. In the Philosophical Transactions may be found a good figure of this insect, with a description by Klein, from a specimen found in Germany; to which is added an account of the same animal discovered in great plenty in a pond on Bexly common in Kent. It is also added that the above-mentioned pond having been perfectly dried, and being suddenly filled during a heavy thunder-storm, swarms of the same animal were again observed in it within the space of two days.

CERTHIA VENUSTA.



CHARACTER GENERICUS.

Rostrum arcuatum, tenue, subtrigonum, acutum.

Lingua acuta.

Pedes ambulatorii.

Lin. Syst. Nat. p. 184.

CHARACTER SPECIFICUS.

CERTHIA viridi-aurea, fronte mento fasciaque
pectoralis violaceis, alis fuscis, abdomine
flavo.

*Fascia pectoralis violacea subtus nigro cineta: ros-
trum pedesque nigra.*

Africæ regionem quæ *Sierra Leona* nominatur incolit hæc avicula, non antea, ut opinor, descripta, cujus magnitudinem naturalem ostendit tabula. Specimen unde delineata est, nobiscum perhumaniter communicavit Thomas Wilson armiger, cui transmissum erat a Domino Joanne Lowes, Sierræ Leonæ chirurgus primario.



THE
LEONA CREEPER.



GENERIC CHARACTER.

Bill slender, incurvated, sharp-pointed.

Tongue differing in the different species.

Toes three before ; one behind : claws hooked and long.

SPECIFIC CHARACTER, &c.

Gold-green CREEPER, with the forehead, chin, and pectoral band violet : the wings brown : the abdomen yellow.

The violet-coloured pectoral band is bounded by black below : the bill and legs are black.

This bird, which seems to be a species hitherto undescribed, is a native of Sierra Leona, and is represented on the plate in its natural size. The specimen was communicated by Thomas Wilson, Esq. to whom it was sent by Mr. John Lowes, chief surgeon to the English settlement at Sierra Leona.



NEPA GRANDIS.



CHARACTER GENERICUS.

Rostrum inflexum.

Antennæ breves.

Alæ quatuor cruciato-complicatæ : antèrius coriaceæ.

Pedes anteriores cheliformes ; reliqui quatuor ambulatorii.

Lin. Syst. Nat. Gmel. p. 2120.

CHARACTER SPECIFICUS, &c.

NEPA testacea, scutello lævi, alis albis maculis venisque flavis.

Lin. Syst. Nat. p. 713.

NEPA ecaudata testacea flavo maculata.

Lin. Syst. Nat. Gmel. p. 2120.

NEPA Surinamensis.

Degeer. inf. 3. p. 379.

Congenerum qui hætenus physicis innotuerunt
species proculdubio maxima est cujus naturalem
magni-

magnitudinem et colores ostendit tabula. In America australi generatur: primaque eam depinxisse videtur celeberrima Domina Merian in historia insectorum Surinamensium. Aquas incolit dulces, et insecta prædatur minora. Major interdum est quam in tabula ostenditur.



THE G R E A T N E P A.



GENERIC CHARACTER.

Beak inflected.

Antennæ short.

Wings four; closing in a crossed direction;aceous on their upper part.

Feet anterior cheliform; the remaining four formed for walking.

SPECIFIC CHARACTER, &c.

NEPA with brown wings variegated with yellow.

The great brown NEPA or Water-Scorpion.

The great Surinam NEPA.

This insect, which the plate represents in its natural size, is by far the largest species yet discovered. It is a native of South America, and seems to have been first figured by the celebrated Madam Merian, who has introduced it into her History of Surinam insects. It is an inhabitant of fresh waters, and lives by preying on the smaller water insects, &c. In size it sometimes exceeds the figures here represented.

ANTHIAS SACER.



CHARACTER GENERICUS.

Caput totum squamosum ; operculo anteriore serrato.

Bloch ichtb. 9. p. 86.

CHARACTER SPECIFICUS, &c.

ANTHIAS radio secundo pinnæ dorsalis longissimo.

Bloch. ichtb. 9. p. 86. t. 315.

Labrus ANTHIAS.

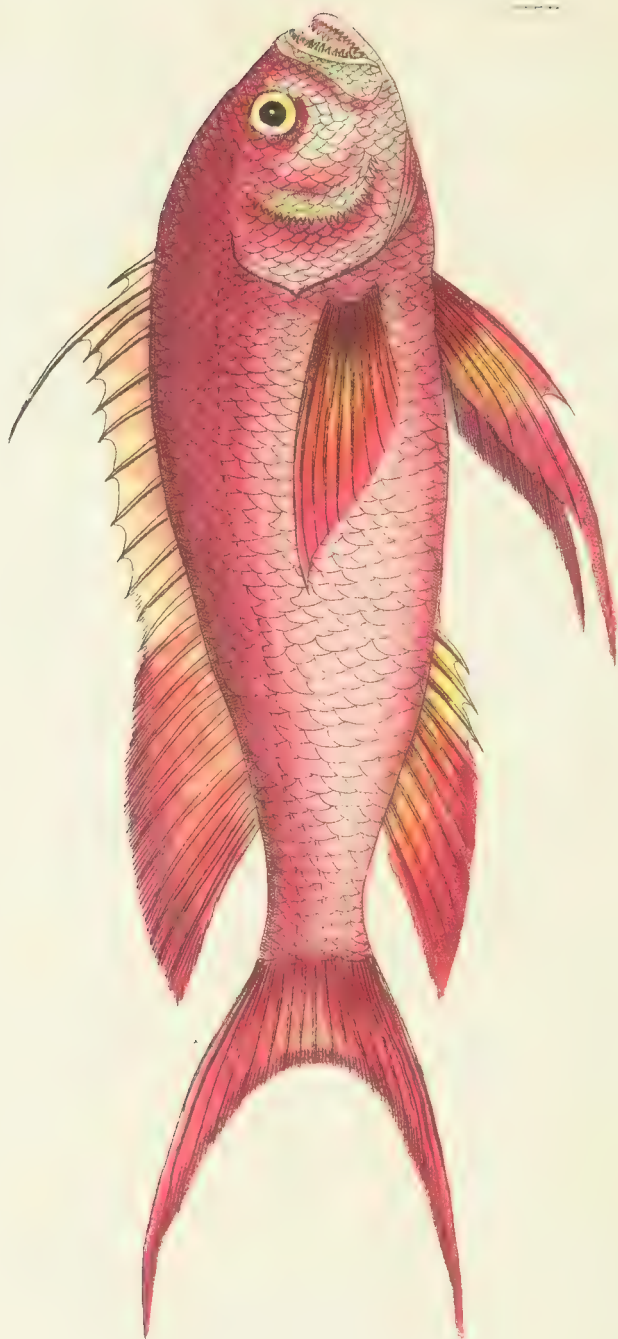
Lin. Syst. Nat. Gmel. p. 1283.

ANTHIAS Rondeletii.

Fonst. de piscib. p. 53. t. 16. f. 1.

Will. ichtb. p. 325. t. x. 5. f. 3.

In mari Mediterraneo præcipue conspicitur formosus hic piscis, pedali, ut plurimum, longitudine. Coloris est læte rosei.



THE
RED ANTHIAS.



GENERIC CHARACTER.

Head completely scaled: anterior gill-cover fer-
rated.

SPECIFIC CHARACTER, &c.

Rose-coloured ANTHIAS, with the second ray
of the dorsal fin extremely long.

The rose-coloured ANTHIAS.

The crimson ANTHIAS.

Le BARBIER.

Bonaterre, Encycl. Ichth. p. 105.

Rondel. Hist. Poiss. 1. p. 161.

This beautiful fish is principally found in the
Mediterranean sea. It grows to the length of about
a foot, and is of an elegant bright rose-color.

SPHINX NERII.



CHARACTER GENERICUS.

Antennæ subprismaticæ, utroque fine attenuatæ.

Lingua exserta (plerisque.)

Palpi duo reflexi.

Alæ deflexæ.

Lin. Syst. Nat. Gmel. p. 2371.

CHARACTER SPECIFICUS.

SPHINX alis subangulatis viridibus ; fasciis variis pallidioribus saturationibus flavescensque.

Lin. Syst. Nat. p. 798.

Frisch. inf. 7. t. 3

Schæff. ic. t. 100. f. 3. 4.

Esp. pap. 2. t. 4.

Cram. pap. 19. t. 244. f. D.

In pulcherrimis insectis quæ generat Europa locum sibi proculdubio vindicat animalculum in tabula depictum ; in variis Germaniæ et Italiæ partibus repertum ; præcipue vero in Italia. Larva ejus folia plantæ depascitur quam Linnæus *Nerium Oleandrum* nominavit.

Qui

Qui iconas historiam naturalem explicantes probe callent, sentient mutuatos esse nos hanc nostram tabulam a figuris tantum non vivis et spirantibus Domini Roefelii; quas si exuperent, admodum defudaturos putemus hodiernos pictores.



THE OLEANDER SPHINX.



GENERIC CHARACTER.

Antennæ subprismatic, attenuated at each extremity.

Tongue (generally) exerted.

Feelers two, reflex.

Wings deflected.

SPECIFIC CHARACTER, &c.

SPHINX with subangular green wings, varied with paler and deeper bands, and with a cast of yellowish rose-color.

The Oleander HAWK-MOTH.

This is unquestionably one of the most beautiful of the European insects. It is found in several parts of Italy and Germany, but more particularly in the former. The caterpillar feeds on the leaves of the *Nerium Oleander* of Linnæus or rose-flowered Oleander.

Those who are conversant in the iconical part of natural history will easily perceive that the annexed
plate

plate is copied from the spirited and beautiful figures of the admirable Roefel, whose representations, I believe, will not easily be surpassed by the attempts of any succeeding artists.

PLOTUS MELANOASTER.



CHARACTER GENERICUS.

Rostrum rectum, acuminatum, denticulatum.

Facies mentumque nuda.

Pedes breves, palmati, omnibus digitis connexis.

Lin. Syst. Nat. Gmel. p. 580.

CHARACTER SPECIFICUS, &c.

PLOTUS supra albo lineatus, abdomine nigro.

PLOTUS melanogaster. Pl. capite lævi, abdomine nigro.

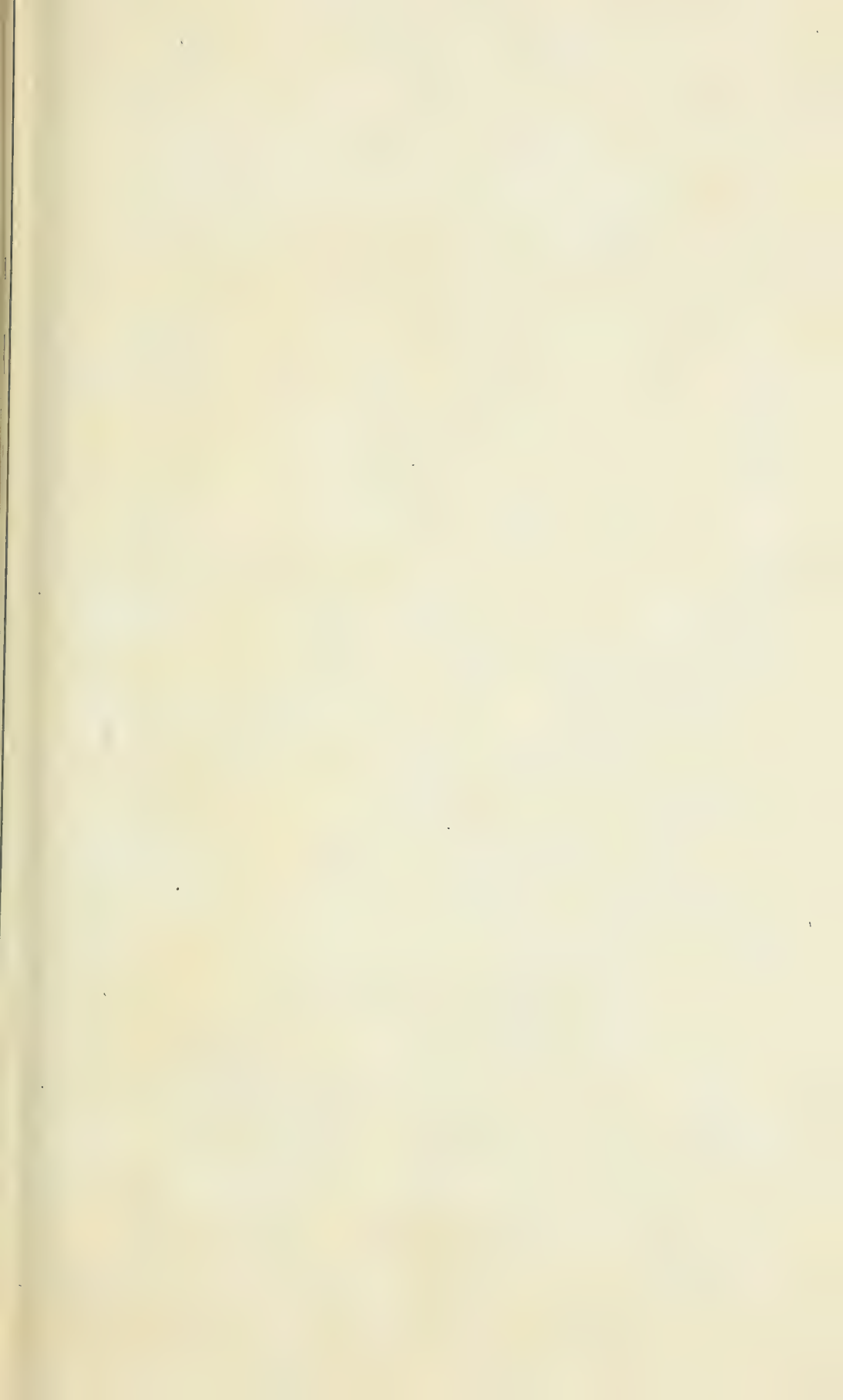
Lath. ind. orn. p. 895.

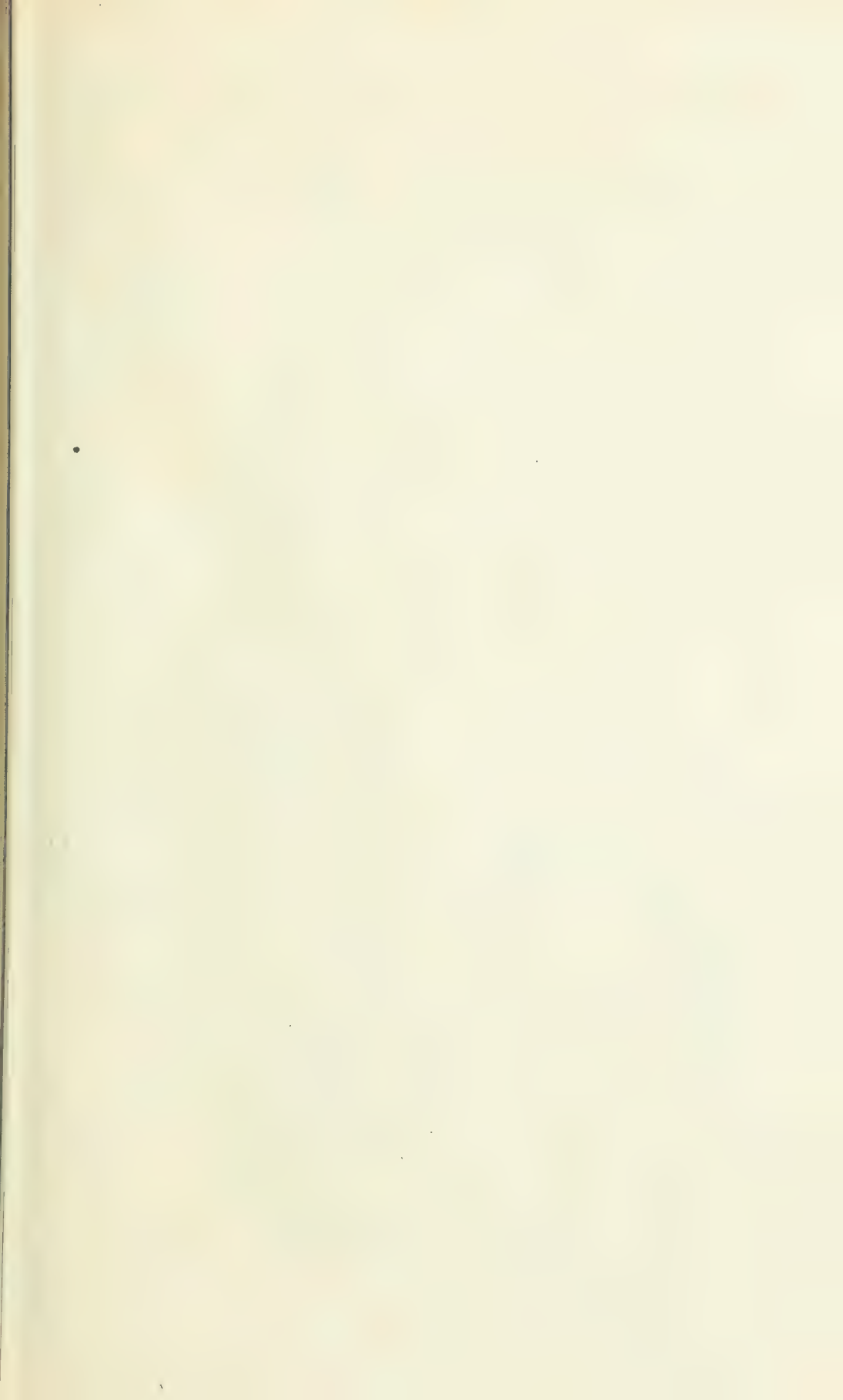
Lin. Syst. Nat. Gmel. p. 580.

ANHINGA melanogaster.

Penn. Zool. Ind. p. 22. i. 12.

Varias Indiæ partes incolit hæc avis, fluviorum præcipue amatrix, ramis infidens super aquas prominentibus, unde longuin collum in pisciculos, aliaque quæ prædari solet, ejaculatur. Rectricum tota longitudo quasi crenata videtur striis plurimis transverse impressis. Magnitudo avis eadem fere est atque Pelecani Graculi Linnæi.







THE
BLACK-BELLIED DARTER.



GENERIC CHARACTER.

Bill long, strait, sharp-pointed.

Nostrils long and narrow, near the base of the bill.

Legs short : toes four : all united by a web.

SPECIFIC CHARACTER, &c.

DARTER with the body streaked with white above ; the abdomen entirely black.

Black-bellied DARTER.

Lath. syn. 6. p. 624.

ANHINGA de Cayenne.

Pl. enl. 959.

This bird is a native of various parts of India, where it chiefly frequents rivers ; generally sitting on branches which closely overhang the water ; from time to time darting down its long neck in order to seize the smaller fishes and other animals on which it preys. The tail feathers are marked throughout their whole length by a great number of transverse undulations or furrows. The size of this species is nearly equal to that of a shag.

HELIX.



CHARACTER GENERICUS.

Animal Limax.

Testa univalvis, spiralis, subdiaphana, fragilis.

Apertura coarctata, intus lunata, f. subrotunda :
segmento circulo dempto.

Lin. Syst. Nat. p. 1241.

HELIX RINGENS.



CHARACTER SPECIFICUS, &c.

HELIX testa subcarinata imperforata convexa :
apertura refupinata ; labio posterius quadru-
plicato.

Lin. Syst. Nat. p. 1243.

List. conch. t. 99. *f.* 100.

Argenv. ed. 2. t. 28. *f.* 13. 14.

HELIX CAROCOLLA.



CHARACTER SPECIFICUS, &c.

HELIX fusca, testa imperforata utrinque convexa,
labro transversali albo.

HELIX

HELIX Carocolla. H. testâ carinata imperforata
utrinque convexa.

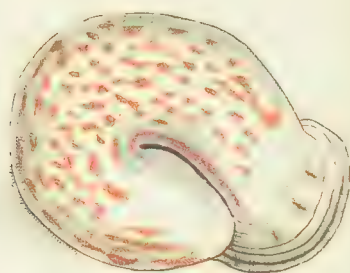
Lin. Syst. Nat. p. 1243.

LUCERNA antiqua.

Argenv. ed 2. p. 214. t. 8. D.

Knorr vergn. 4. t. 5. f. 2. 3.

Cum incolat, ut plurimum, genus numerosum Helicis aquas dulces aut loca terrestria, eo fit, ut careat crassa illa et polita substantia qua testæ marinæ præcellunt. At quamvis non jactent pulchritudinem, multæ tamen sunt species, quarum forma mira et inusitata abunde doceat, habere Naturam fere incredibilem et veluti lusoriam varietatem. Inter species maxime notabiles numerari possunt *Helix ringens*, et *Helix carocolla*, quarum priorem denotant in tabula figuræ minores, posteriorem figuræ majores. Ambæ in India innascuntur.



SNAIL.



GENERIC CHARACTER.

Animal resembling a slug.

Shell spiral, sub-pellucid.

Aperture femilunar.

RINGENT SNAIL.



SPECIFIC CHARACTER, &c.

Whitish HELIX, with yellowish-brown spots,
and inverted ringent mouth.

INDIAN SNAIL with inverted ringent mouth.

Toothed INDIAN SNAIL.

LAMP SNAIL.



SPECIFIC CHARACTER, &c.

Brown imperforated HELIX, flightly convex on
both sides, with white transverse lip.

The Indian LAMP-SNAIL.

La LAMPE antique.

Argenv. ed. 2. p. 216. pl. 8. D.

The genus *Helix* is more distinguished by the number than the beauty of its species ; which being mostly either land or fresh-water inhabitants, have not that thick and glossy appearance which, in general, distinguishes those shells which are natives of the sea. It is however marked in many species by a high degree of singularity in point of form ; and exhibits striking examples of that strange variety of shape into which Nature has arranged her productions. Amongst the more remarkable species may be numbered the *Helix ringens*, represented by the smaller figures, and the *Helix Carocolla*, represented by the larger figures on the present plate. Both these shells are natives of India.

LONCHIURUS BARBATUS.



CHARACTER GENERICUS.

Pinnæ Ventrals discretæ : *Caudalis* lanceolata.

Bloch. ichth. 10. p. 119.

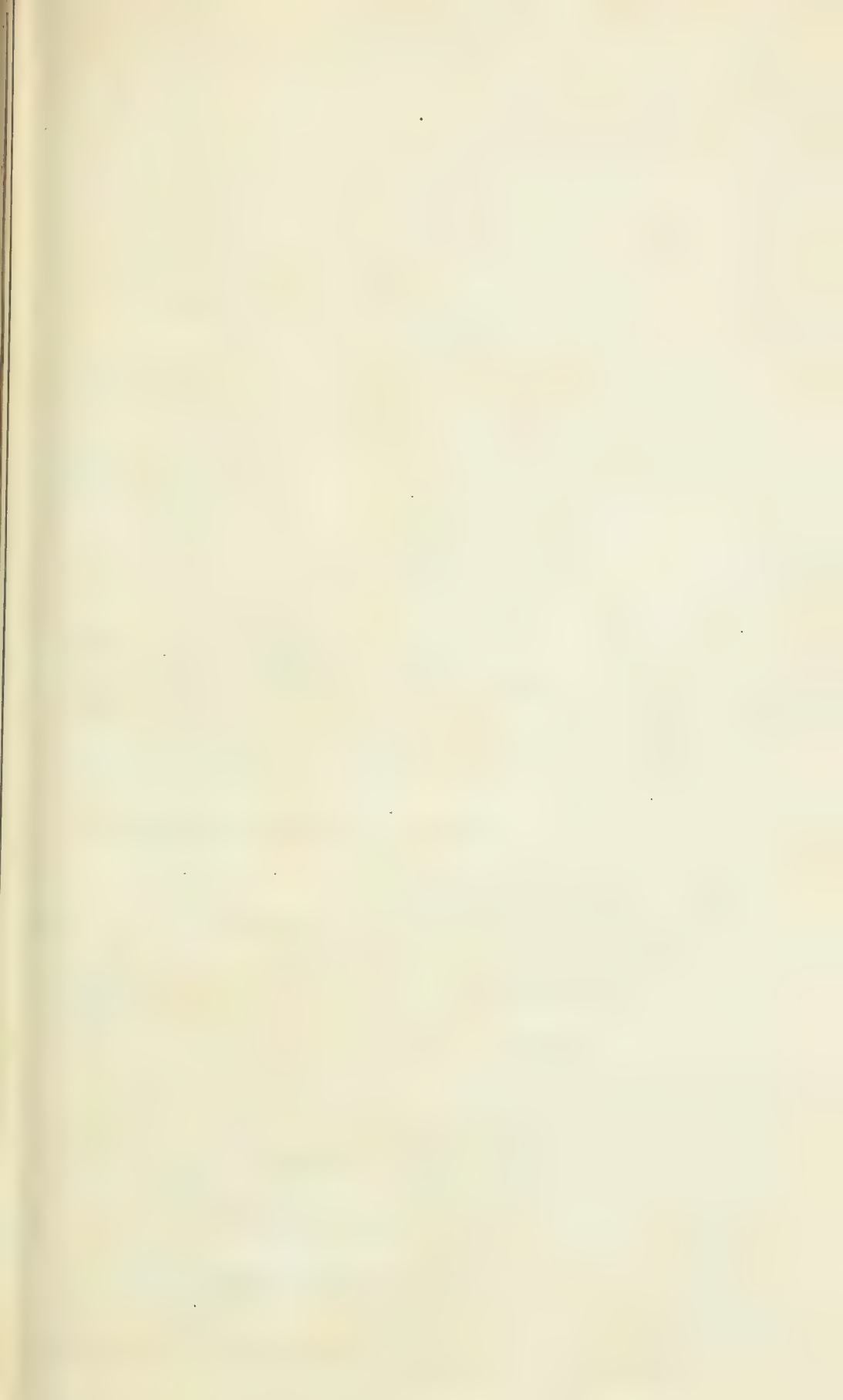
CHARACTER SPECIFICUS.

LONCHIURUS cirris duobus mentalibus.

Bloch. ichth. 10. p. 120. t. 360.

Pisces Thoracici.

Surinamiam incolit *Lonchiurus barbatus*, in fluviis præcipue degens. Longior raro est decem unciiis, colore plerumque fusco, quem plus minus faturatum habent diversa specimina.





Pomadasys commersonnii (Forsk.)

THE BEARDED LONCHIURUS.



GENERIC CHARACTER.

Ventral Fins separate: *Caudal Fin* lanceolate.

SPECIFIC CHARACTER, &c.

Brown LONCHIURUS with two cirri or beards
under the chin.

The Lancet-Tail, or Bearded LONCHIURUS.

The bearded Lonchiurus is a native of Surinam, where it is generally found in rivers. It seldom exceeds the length of about ten inches, and is of a brown color, deeper or lighter in different individuals.

ALCYONIUM? BOTRYOIDES.



CHARACTER SPECIFICUS.

ALCYONIUM? (Spongia?) flavo-purpurascens,
caule crasso stuposo, superne ramoso, ramulis
densissime congestis.

SPONGIA floribunda? Sp. amorpha, fasciculis
ramosis confluentibus paleaceo-tomentosis,
apice crassioribus obtusis.

Pall. el. zooph. p. 378. & p. 434 addend.

Pulchri et mirabilis Alcyonii quod neminem opinamur descripisse, veram magnitudinem depinximus. Litora incolit Australasiæ, insulæ præcipue quæ *Norfolcia* dicitur, et profunde sub aquismersum adhæret rupibus. Caulis ramique majores flavo-pallent, ramulis minoribus vivide rubentibus seu purpureis. Totum Alcyonium molliculum, sed tenax; tactu durum, si exaruerit; et videtur componi omnino e fibris parvulis, vermiculatis, quarum extremitates acuminatæ. Racemi qui terminales vocantur constant e tubulis divisis et sub-divisis, singulis quasi in calycem leviter expansum desinentibus; bracteamque, seu foliolum florale (ut physice loquar) non male simulantibus, qui forsan munimento sint illi

Illi zoophyti parti quæ animalis esse videtur; organo nempe flori-formi, flavo-pallenti, ex iisdem fibris vermiculatis confecto quibus reliquæ partes, sed minoribus et confertioribus. Constat hæc quasi corolla seu pars hydræformis e quinque vel sex segmentis oblique acuminatis et convergentibus, foramen tubulatum habentibus, per quod ipsi Alcyonio nutrimentum possit administrari. Licet tamen conjicere, nec inepte, polypos seu hydras (si quæ revera sint) intra tubulos quos supra memoravimus, sese subduxisse, calycibus tantum sive foraminibus externis in conspectu relictis. A transverso caulis segmento manifestum erit Alcyonium esse veluti cancellatum et leviter compactum, cavitatibus omnibus in longitudinem ab imo ad summum continuatis.

Elegans Alcyonii botryoidis specimen Societati Linnæanæ Londinensi donavit Dominus Paterfon, colonix Britannicæ apud Australasiam Subpræfectus.

Figura inferior monstrat specimen in spiritu vini diu asservatum: tertia partem racemi externi magnitudine aucti ut corolliformes terminationes manifestius pateant: quarta unam e fibris vermiculatis e quibus totum componitur, magnitudine auctam.



3



4



CAULIFLOWER ALCYONIUM.



SPECIFIC CHARACTER.

Yellow-purple ALCYONIUM? (Sponge?) with thick, stupose stem, ramifying on the upper part ; with very thickly-crowded branchets.

This elegant and singular Alcyonium seems a species hitherto undescribed, and is a native of the coasts of New Holland, and more particularly of Norfolk Island ; adhering to rocks at a considerable depth. The plate represents it in its natural size. The color of the stem and principal branches is pale yellow : of the smaller ramifications bright crimson or purple. The substance of the whole is softish, but tough ; harsh to the touch in its dried state ; and seemingly composed entirely of small, thickish, vermicular fibres with attenuated or sharpened extremities. The terminal clusters consist of divided and subdivided tubular processes, each ending in a calycular, slightly-expanded part, not ill resembling a bractea, and forming a kind of guard for what appears to be the animal part of the zoophyte ; viz. a kind of flower-shaped organ of a pale-yellow color, and composed of the same kind of thickish vermicular fibres with the rest, but on a smaller scale, and somewhat more closely disposed.

This

This flower, or polype-like part consists of five or six obtusely-acuminated, converging segments, leaving a tubular opening, through which the proper nutriment may be conveyed to the whole. It is however no improbable supposition that the real polypes, (if such exist) may have withdrawn themselves into the lower parts of their respective tubular branches, leaving only the external calyces in view. A transverse section of this Alcyonium shews it to be of a cancellated or loosely-compacted fabric, the hollows all running in a longitudinal direction from the bottom upwards.

An elegant specimen of this Alcyonium was sometime since presented to the Linnæan Society by Colonel Paterfon, Vice-Governor of the English settlement in New Holland.

The lower figure represents a specimen preserved for a considerable time in spirit of wine.

Fig. 3. A magnified view of one of the exterior ramifications, in order to shew the flower-like terminations.

Fig. 4. Magnified view of one of the vermicular fibres of which the whole is composed.

LANIUS COLLURIO.



CHARACTER GENERICUS.

Rostrum rectiusculum, dente utrinque versus apicem, basi nudum.

Lingua lacera.

Lin. Syst. Nat. p. 134.

CHARACTER SPECIFICUS, &c.

LANIUS ferrugineus, capite cano, cauda fasciaque tranfoculari nigris.

LANIUS minor rufus, feu tertius Aldrovandi.

Raii syn. p. 18.

LANIUS Collurio. L. cauda fubcuneiformi, dorfo grifeo, reëtricibus quatuor intermediis unicoloribus, roftro plumbeo.

Lin. Syst. Nat. p. 136.

Notior longe in Anglia Lanius Collurio Lanius majore, feu *Excubitor* Linnæi, verno tempore ramis arborum altioribus juxta fepes infidet, nec propiorum populi prætereuntis adventum valde formidat. Femina mare paulo major, fubtus ochraceo-pallido-albet, lineis plurimis tranfverfis fufcis notata.



THE RED-BACKED SHRIKE.



GENERIC CHARACTER.

Bill straitish, with a tooth or small process on each side near the tip.

Tongue jagged.

SPECIFIC CHARACTER, &c.

Ferruginous SHRIKE, with grey head, black tail, and a black band across the eyes.

L'ECORCHEUR.

Briss. 2. p. 151.

Buff. ois. 1. p. 302.

The Smaller SHRIKE, or Red-backed Butcher-Bird.

Lesser BUTCHER-BIRD or Flusher.

Will. orn. p. 88.

The *Lanius Collurio* is a much more common species in England than the great shrike or *Lanius excubitor* of Linnæus. It is a bird of an audacious disposition, and may often be seen in the spring

season fitting on the taller branches of trees, and about hedges, and is not easily disturbed by a near approach. The female differs in having the under parts of a very pale ochre-color, with numerous transverse lines or streaks of a dusky cast. It is also rather larger than the male.

TRACHICHTHYS AUSTRALIS.

CHARACTER GENERICUS.

Caput antice rotundatum : *Oculi* magni : *Os* amplum, edentulum, descendens.

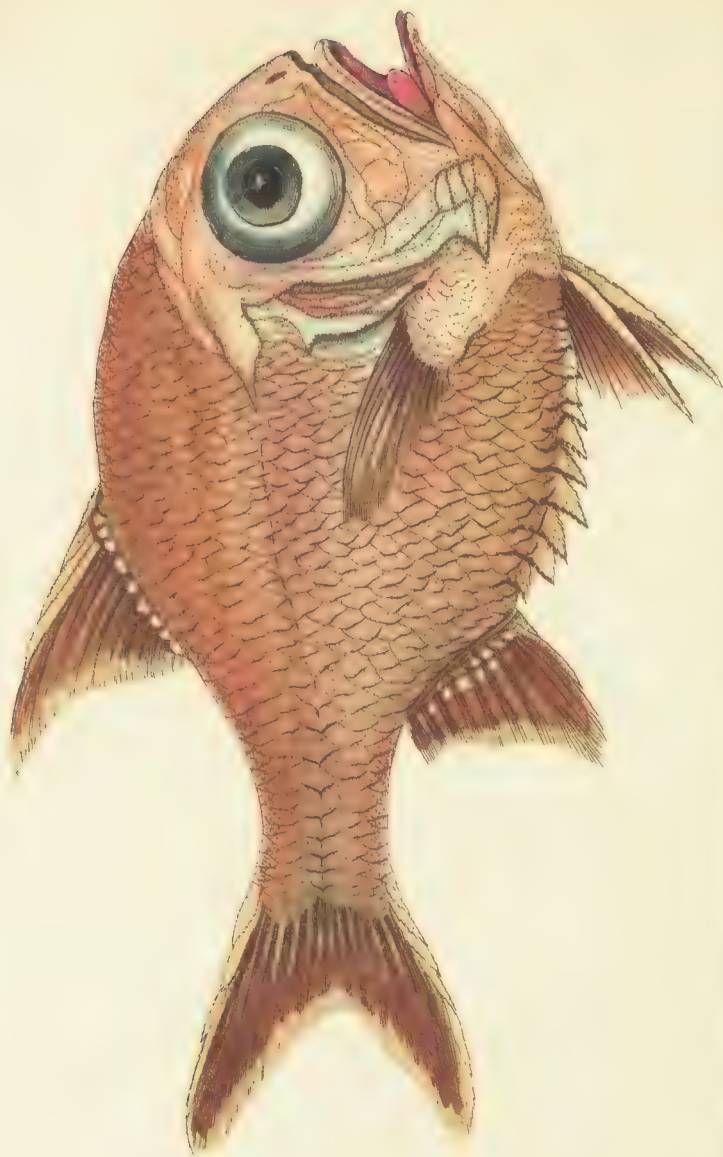
Membrana branchioflega radiis octo, quorum quatuor inferiores margine scabri.

Squamæ scabræ : *Abdomen* carinato-cataphractum,

Cernere est in tabula veram piscis miri magnitudinem. Corpus modice crassum, præcipue a parte antica. Caput permagnum. Os deorsum se recludit fere perpendiculariter, linea tamen curvata ; eoque clauso, frontis ambitus perfecte ovatus. Oculi prægrandes : videturque iris vivo fuisse argentea, qualis solet plerisque piscibus. Os caret dentibus. Lingua modica, maxillæ inferiori quasi adnata, cujus ad extremitatem fere pertingit. Branchiarum opercula partem habent superiorem spina magna, scabra, instructam, ad basin crassissima. Partem quoque inferiorem occupat spina, sed minor et brevior. Operculi utriusque circumferentia paululum sinuata est, prope medium prominentiis brevissimis, subacutis : reliquum constat e quinque vel sex lamellis in longitudinem ductis, quarum margines scabræ more corporis. Ex radiis qui quasi octo sunt in membrana branchioflega, quatuor inferiores reliquis sunt crassiores,

crassiores, lateribus scabris. Vix alius piscis, si *cataphraētos* excipiamus, vestitu æque duro induitur; squamæ enim solidissimæ et quasi cuti adnatæ, adeo arcte sibi invicem affiguntur, ut vix possibile sit forcipe unam evellere, nisi ipsius corii aliquid simul evellatur; qua in re similitudo quædam est huic cum genere quod *Balistes* dicitur. Squamarum præterea generalis formatio respondet fere squamis *Chætodontorum*; extrinsecus enim terminantur quasi fimbria parvularum et fortium spinarum, præter alias plures in superficiem conspersas. Differunt paululum a se invicem squamæ in diversis partibus, et prope abdomen magis dilatantur. Abdomen ipsum carinatum et quasi *cataphraētum* est serie octo squamarum scabrarum et validarum, quarum unaquaque prominet in spinam brevem, retro tendentem, et carinam subtus efficientem, lateribus sursum continuatis quasi quadrantem unciae ab utroque latere abdominis. Squamæ quoque abdominis, (ut prius notavimus) hac in parte paulo latiores quam alibi gradatim decrescunt versus medium corporis. A cauda utrinque linea paululum affurgit similis carinata: media enim pars singulæ squamæ altius prominet quam reliqua superficies, squamaque ipsæ hoc in loco grandiores sunt quam alibi. Præter hanc vix ulla visibilis est linea lateralis. Pinna dorsalis quatuordecim habet radios quorum septem posteriores versus apices dividuntur in molliores ramulos. Pinnæ pectorales tredecim habent radios. Ventrals septem. Anals duodecim, plerisque apud apices mollius ramulosis. Caudam ore furcæ curvata constat fere e viginti quatuor radiis, quorum exteriores utrinque

utrinque validi sunt seu spinosi; reliqui quales sunt in pinna anali. Pinnarum omnium, exceptis pectoralibus, tres primores radii validissimi sunt, scabri, exterius tenuiter ferrati; præcipue vero ventralium. Novum genus constituit *Trachichtys Australis*, in piscibus *thoracicis* Linnæi numerandum, iis nempe quorum pinnae ventrales sub pectoralibus sitæ sunt. Cum asperrimam habeat superficiem, *Trachichthyn* diximus; nomini autem triviali (donec melius physici innotuerit) *australis* inserviat. E veteribus omnibus Linnæanis generibus, iis scilicet quæ in Systematis Naturæ editione duodecima continentur, nullum est cujus ad similitudinem magis accedit quam ad *Perca*. Litora incolit Australasiæ. Ex variis piscibus quos spiritu vini conditos collegerat Dominus White coloniæ nostræ Australiacæ chirurgus primarius, in specimen incidimus unde depicta est hæc nostra effigies. Vidimus quoque apud Dominum White iconem *Trachichthys* non sane exquisitam, fatis tamen fidam ut speciem definiat, et colorem genuinum demonstret, læte scilicet carneo-ferrugineum, qui in specimine asservato in fuscum exoleverat. Partis mediæ omnium pinnarum saturatior est color quam in reliquo corpore: margines vero flavescunt.



THE SOUTHERN TRACHICHTHYS.



GENERIC CHARACTER.

Head rounded in front: Eyes large: Mouth wide, toothless, descending.

Branchiostegous Membrane furnished with eight rays, of which the four lowermost are rough on the edges.

Scales rough: Abdomen cataphracted with large carinated scales.

This remarkable fish is represented on the plate in its natural size. The body is moderately thick, more especially on the fore part: the head is very large; the mouth opening downwards in an almost perpendicular direction, but in a curved line; and, when closed, the outline of the head or front is completely oval. The eyes are extremely large, and the iris appears to have been of a silvery hue, or as in generality of fishes. The mouth is destitute of teeth, and the tongue, which is moderately large, is adnate, or fixed to the lower jaw, to the extremity of which it almost reaches. The *Opercula* or *gill-covers* are furnished on the upper part with a large, strong, and rough spine, which is very thick at its base: a smaller and shorter spine also occurs at the lower part:

part: the outline of each operculum is somewhat sinuated by two very short and subacute processes towards the middle; and the remainder is composed of five or six longitudinal rough-edged lamellæ resembling the surface of the body. The *membrana branchiostega* has about eight rays, of which the four lowermost are rough-edged, and thicker than the rest. Perhaps no fish yet known, if we except what are called mailed or cataphracted fish, is so strongly coated as the present; the scales forming a kind of processes, which are so strongly and closely inserted, that it is not possible by means of a forceps to detach one from the rest, without bringing away with it a small portion of the corium or general integument itself; the skin in this respect resembling in some degree that of the genus *Balistes*. These scales or processes, as to their general structure, are analogous to those of the Chætodons; terminating outwardly in a fringe of small, strong spines, besides several scattered ones on the surface. They differ somewhat in shape on different parts of the animal, and, as they approach the abdomen, become more dilated. The abdomen itself is carinated and cataphracted by a row of eight strong, rough incisures or scales, each of which projects into a shortish spine, pointing backwards, and forming a sharp keel beneath, while the sides are continued upwards near a quarter of an inch on each side the abdomen. The scales of the abdomen, as before observed, are also somewhat broader in this part, and gradually lessen towards the middle of the body. On each side the tail is a slightly-prominent line, or an approach to a carinated appearance,

appearance, owing to the middle of each scale on that part rising up a little above the level of the rest: the scales also along this part are rather larger than elsewhere: otherwise the appearance of a lateral line is scarce distinct. The *dorsal fin* has fourteen rays, of which the seven hindmost subdivide towards their tips into softer ramifications. The *pectoral fins* have thirteen rays: the *ventral fins* seven: and the *anal fin* twelve rays, most of which subdivide into softer ramifications at the tip. The *tail* is strongly furcated, and consists of about twenty-four rays, of which the external or shorter ones are strong or spiny; the rest of a similar appearance to those of the anal fin. The three first rays of all the fins, except the pectoral ones, are very strong, rough, and finely serrated outwards, but more particularly those of the ventral fins.

This fish, which constitutes a new genus, belongs to the Linnæan division of *Thoracici*, or such as have the ventral fins situated beneath the pectoral ones. From its uncommonly rough surface I have given it the generic name of *Trachichthys*, and as a trivial name, at least till we are better acquainted with its natural history, it may be sufficient to distinguish it by the title of *Australis*. Of all the old Linnæan genera, or those contained in the twelfth edition of the *Systema Naturæ*, it seems to approach the nearest to that of *Perca*. The *Trachichthys Australis* is a native of the coasts of New Holland, and the specimen from which the present engraving was taken occurred amongst several other fishes preserved in spirits in the collection of Mr. White, chief Surgeon to the
English

English settlement in those regions. Among some drawings in Mr. White's possession I have also observed a representation of this fish, which though not executed with minute precision as to some particulars, serves at least to identify the animal, as well as to shew the natural color, which is a bright pink-ferruginous or fair reddish-brown; whereas in the preserved specimen the color is faded into a dull brown. The middle part of all the fins is of a deeper color than the rest of the animal, and the edges are lighter, or of a yellowish tinge.

NAIS PROBOSCIDEA.

CHARACTER GENERICUS.

Corpus repens, longum, lineare, pellucidum, depressum.

Pedunculi fetis simplicibus.

Tentacula nulla.

Oculi duo aut nulli.

Lin. Syst. Nat. Gmel. p. 3120.

CHARACTER SPECIFICUS, &c.

NAIS fetis lateralibus solitariis, proboscide longa.

Lin. Syst. Nat. Gmel. p. 3121.

Müll. verm. hist. I. 2. p. 21. n. 153.

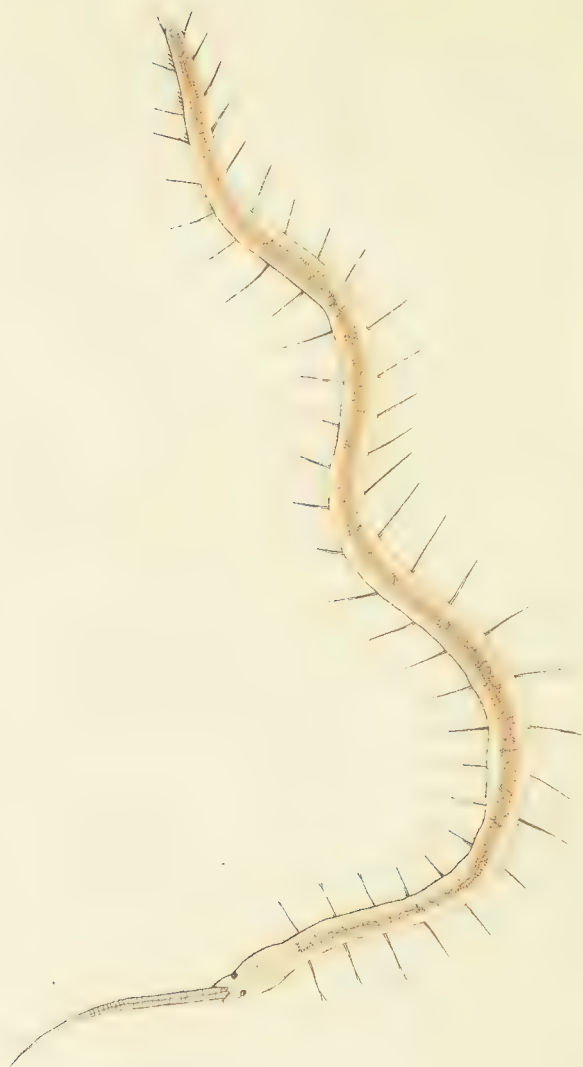
Zool. dan. prodr. 2649.

NEREIS (lacustris) linearis, lingua exserta.

Lin. Syst. Nat. p. 1085.

Ternas unciae partes raro superat longitudine hæc species, aquarum puriorum stagnantium incola, in quibus æstivo tempore sæpius possit conspici. Cum motus generalis languide sit tranquillius, non raro tamen evenit ut corpus subito et violenter contorqueatur. Species ipsa facillime a reliquis dignoscitur,

tur, rostro seu proboscide prælonga pro corporis magnitudine, et naturaliter exerta. Varia specimina plus minus habent pelluciditatis. Alia omnino vitrea ab ipsa aqua vix possunt distingui; alia subfusca de longinquo evidenter discerni. In eorum animalium numero est quæ mira pollent facultate se regenerandi, quæque in partes duas vel plures divisa, paucorum dierum spatio totidem perfectæ monstrabunt specimina.



ROSTRATED NAIS.



GENERIC CHARACTER.

Body repent, long, linear, pellucid, depressed.

Feet consisting of simple bristles.

Tentacula none.

Eyes two, or none.

SPECIFIC CHARACTER, &c.

NAIS with single lateral bristles, and long proboscis.

Long-snouted NAIS.

The Proboscis WATER-WORM.

Trembley. hist. polyp. t. 6.

Schæff. armpolyp. 1754. t. 3.

Roef. inf. 3. p. 483. t. 78, &c.

This species, which rarely exceeds the length of about three quarters of an inch, is a native of clear stagnant waters, in which it is not uncommon during the summer months, and is remarkable for the sudden and violent contortions into which it frequently throws itself, while its more general motion is smooth and somewhat languid. As a species it is clearly distinguished from others of this genus by
the

the length of its proboscis or tongue, which is naturally exerted, and of a great length in proportion to the body. In the degree of transparency this animal differs greatly in different individuals; being sometimes seen of a glassy clearness, so as scarce to be distinguishable from the water in which it swims, and at other times of a dusky cast, so as to be readily perceptible at a distance. It is one of those animals which are possessed, in a very high degree, of the power of reproduction, and if cut into two or more parts, will in a few days constitute so many complete specimens.

SPONGIA FLABELLIFORMIS.



CHARACTER GENERICUS.

Animal ? fixum, flexile, polymorphum, torpidissimum, contextum vel e fibris reticulatis, vel e spinulis gelatina viva vestitis ;

Osculis seu foraminibus superficiei aquam respirantibus.

Soland. et Ellis zooph. p. 182.

CHARACTER SPECIFICUS, &c.

SPONGIA flabelliformis conformis orbiculata, fibris cartilagineis dense reticulatis.

Lin. Syst. Nat. p. 1296.

RETE philippense nigrum, telis quadrangulis.

Pet. gaz. t. 32. f. 1.

FLABELLUM marinum aruense.

Rumph. amb. 6. t. 80. f. 1.

Elegantis hujus Spongiæ, Gorgoniis aliquibus reticulatis simillimæ, differt longe a plerisque congeneribus generalis aspectus. Nec aliter formatur et alia species, quam Linnæus Spongiam *Ventilabrum* nominavit. In maribus Indicis generatur Spongia flabelliformis, interdum major longe specimine quod depinximus.

FAN SPONGE.



GENERIC CHARACTER.

Animal? fixed, flexible, torpid, of various forms; composed either of reticulated fibres, or masses of small spines interwoven together; cloathed with a gelatinous flesh full of small mouths or foramina on its surface, by which it sucks in and throws out the water.

SPECIFIC CHARACTER, &c.

Fan-shaped orbicular cartilaginous SPONGE,
with quadrangularly-reticulated fibres.

Blackish fan-shaped Indian SPONGE.

Cartilaginous Fan-Sponge.

This curious Sponge differs greatly in habit or general form from most of its congeners, bearing a strong resemblance to some of the reticulated *Gorgoniæ*: this is also the case with another species of sponge, viz. the *Spongia Ventilabrum* of Linnæus. The present species is a native of the Indian seas, and is sometimes found considerably larger than the specimen here represented.



CERTHIA CHALYBEA.



CHARACTER GENERICUS.

Rostrum arcuatum, tenue, subtrigonum, acutum.

Lingua acuta.

Pedes ambulatorii.

Lin. Syst. Nat. p. 184.

CHARACTER SPECIFICUS, &c.

CERTHIA viridi-aurea, alis caudaque fuscis,
fascia pectorali coccinea lunula cærulea, ab-
domine albido.

CERTHIA viridis nitens, pectore rubro, fascia
antica chalybea.

Lin. Syst. Nat. p. 186.

CERTHIA torquata capitis bonæ spei.

Briss. av. 3. p. 643. *t.* 32. *f.* 1.

In Africa, et præcipue in promontorio bonæ spei
conspicitur *Certhia chalybea*, coloribus interdum
varians; collari nempe sive lunula chalybea plus
minus lata in diversis speciminibus. Tabula illam
ostendit magnitudine naturali.



RA.

THE CHALYBEAN CREEPER.



GENERIC CHARACTER.

Bill slender, incurvated, sharp-pointed.

Tongue differing in the different species.

Toes three before ; one behind : claws hooked and long.

SPECIFIC CHARACTER, &c.

Gold-green CREEPER, with the wings and tail dusky ; the breast marked by a scarlet band and steel-blue crescent ; the abdomen whitish.

Le SOUI-MANGA à collier.

Buf. ois. 5. p. 502.

GRIMPEREAU du Cap de Bonne Esperance.

Pl. enl. f. 3.

Collared CREEPER.

Lath. syn. p. 709.

The Chalybean Creeper is a native of Africa, and is principally seen about the Cape of Good Hope. It sometimes varies a little in colors ; the blue band or crescent being more or less wide in different specimens. The plate represents it in its natural size.

EPINEPHELUS MERRA.

CHARACTER GENERICUS.

Caput totum squamatum, operculo anteriore ferrato, posteriore aculeis armato.

Bloch ichtb. x. p. 9.

CHARACTER SPECIFICUS, &c.

EPINEPHELUS albus, maculis numerosis subhexagonis fuscis.

EPINEPHELUS corpore toto maculato.

Bloch ichtb. 10. p. 15.

PERCA tota maculis fuscis et punctis albis varia; pinna dorfi aculeorum undecim.

Seb. mus. 3. p. 76. *tab.* 27. *fig.* 7.

Mare Japonicum incolit Epinephelus Merra, longitudine quasi pedali. In genere Percæ locum illi proculdubio assignasset systema Linnæanum.



Paralichthys oblongus, 1799.

THE
SPOTTED EPINEPHELUS.



GENERIC CHARACTER.

Head entirely covered with scales : anterior Gill-Cover ferrated, posterior spiny.

SPECIFIC CHARACTER, &c.

White EPINEPHELUS, with numerous sub-hexagonal brown spots.

Le MERRA.

Bloch t. 329.

The spotted Epinephelus is a native of the Japanese sea, and is about a foot in length. Linnæus would doubtless have placed it the genus Perca.

MADREPORA ROSEA.



CHARACTER GENERICUS.

Animal Medufa.

Corallium cavitatibus lamellofo-ftellatis.

Lin. Syft. Nat. p. 1272.

CHARACTER SPECIFICUS.

MADREPORA ramofa rofea, ftellis prominenti-
bus marginatis.

MADREPORA hirtella ? ? ?

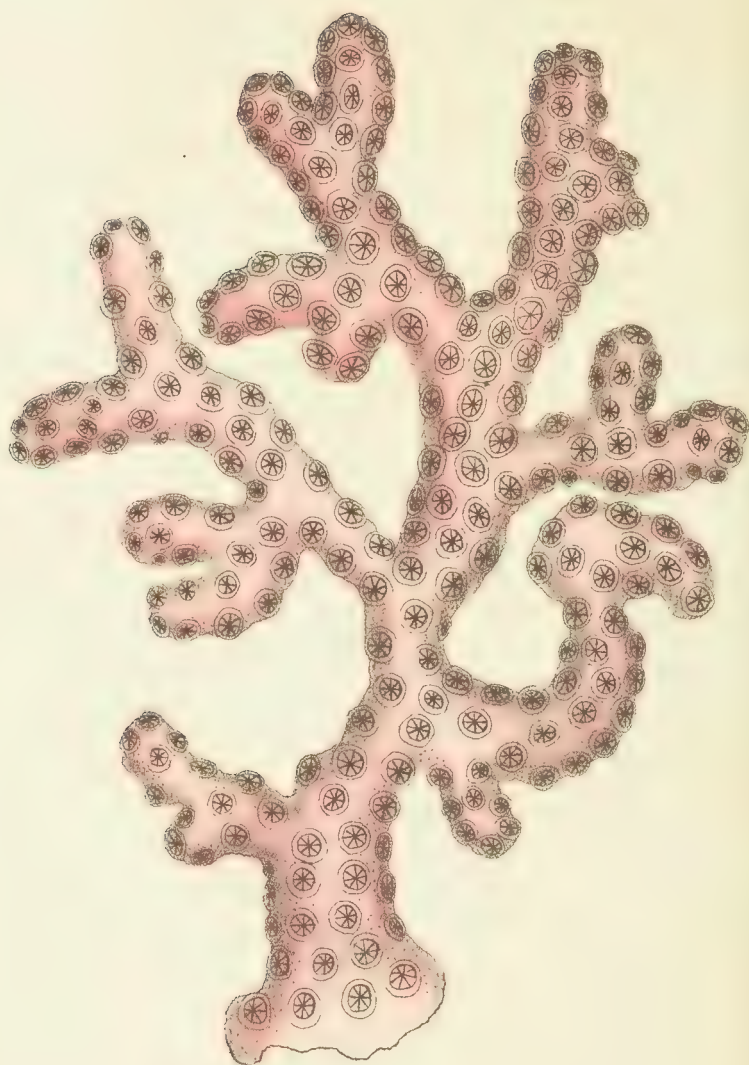
Pall. el. zooph. p. 313.

MADREPORA rofea ? ?

Pall. el. zooph. p. 312.

In pulcherrimis Madreporarum ramofarum habenda eft hæc fpecies, cui recens e mari extractæ color læte rofeus, poftea fit pallidior et evanidus. In oceano Indico innafcitur, eadem magnitudine quam cernere eft in tabula.





Pub^d by J. P. Noddes May 1799

ROSE MADREPORE.



GENERIC CHARACTER.

Animal allied to a Medusa.

Coral marked with lamellar star-shaped impressions or cavities.

SPECIFIC CHARACTER.

Branching rose-coloured MADREPORE, with prominent margined stars.

This is one of the most elegant of the ramified Madrepores, being, when recent, of a beautiful rose-color, which fades to a paler tinge afterwards. It is a native of the Indian ocean, and is represented on the plate in its natural size.

SCARABÆUS MACROPUS.



CHARACTER GENERICUS.

Antennæ clavatæ capitulo fissili.

Tibiæ anticæ sæpius dentatæ.

Lin. Syst. Nat. p. 541.

CHARACTER SPECIFICUS.

SCARABÆUS scutellatus viridis nitens, subtus cupreo-auratus, pectore porrecto, femoribus posticis crassissimis.

Francill. descr. scarab. rar.

In formandis scarabæis variam et quasi ludibundam esse naturam dudum observavimus; in scarabæis præcipue majoribus, qui, ut plurimum, nigri aut fusci, privantur splendidis coloribus, quibus superbiunt multa ex insectis coleopteris minoribus. A congeneribus tamen insigniter differt species de qua jam loquimur; cum formæ inconcinnæ, quæque carere videtur apto partium consensu, adjecti sunt colores vividi et pulcherrimi. Totus scarabæus superior splendide gramineo-viret quasi vernice oblitus; inferior nitet more cupri politissimi; crura postica præcipue, adeo enormiter magna, si cum corpore comparantur, ut primo visu impedimento ei et incommodo esse videantur. Dictus inde est

scarabæus

scarabæus macropus. Ad saltum tamen, si forte falliendo graditur, apta omnino et accommodata est hæc insolita crurum longitudo.

Mirum hoc insectum a Potosi delatum in pinacotheca exstat Domini Francillon, qui iconem ad hoc opus ornandum humanissime nobiscum communicavit, eodem corporis situ insectum monstrantem quo illa quæ ab ipso Domino Francillon non ita pridem publicata est.



THE KANGUROO BEETLE.



GENERIC CHARACTER.

Antennæ divided at the tip or head into several lamellæ.

Tibiæ or second joints of the fore-legs generally toothed.

SPECIFIC CHARACTER.

Scutellated bright-green BEETLE, gold-coppery beneath; with projecting breast; the thighs of the hind-legs very thick.

Francill. descr. of a rare Scarabæus.

It has been already observed in the present work that in the genus *Scarabæus* Nature seems to have exerted an almost capricious diversity of form; the most extravagant shapes that can easily be conceived presenting themselves to our view amongst the larger animals of this tribe. It is also to be observed that, in general, the color of the larger beetles is either black or brown, and seldom exhibits that rich assortment of brilliant hues so conspicuous in many of the smaller coleopterous insects. A striking exception however to this rule occurs in the insect represented

in

in its natural size on the present plate, and which to a form the most seemingly disproportioned unites the most beautiful colors; the whole animal, on the upper surface, being of the richest varnishy grass-green, while the under surface is ornamented by a metallic lustre resembling that of burnished copper: this is particularly conspicuous on the hind legs, which are of so enormous a size in proportion to the rest of the animal as to appear, at first view, rather an inconvenience to it. The animal may however be formed for leaping; for which purpose this extravagant size of leg may be well calculated. It is from this circumstance that it has received the title of the Kangaroo Beetle.

This singular Beetle was received from Potosi, and is preserved in the elegant collection of Mr. Francillon, who politely permitted a figure to be engraved for the present publication, and which shews the insect in the same posture with the beautiful representation some time ago published by that gentleman.

PLATYPUS ANATINUS.



CHARACTER GENERICUS.

Os anatinum.

Pedes palmati.

Novum ominino et inauditum constituit genus quod in tabula depingitur animal, juxta Linnæanam divisionem in *Brutorum* ordine reponendum, et Myrmecophagis proxime annumerandum. Diverfum omnino ab omnibus *Mammalibus* quæ hæcenus physicis innotuerint, perfectam rostri anatini similitudinem capiti quadrupedis adjunctam fortitum est. Rei novitate perculsi non nisi inspectione semel atque iterum attentissime habita persuadere nobismetipsis potuimus verum et genuinum esse quadrupedis rostrum; primo suspicantes artem lusoriam cum ipsa Natura felicissime certasse: eandem enim habet epidermidem, ferraturas, aperturam, totam denique rostri conformationem anas quæ *clypeata* dicitur Linnæi, seu alia aliqua anas latirostra.

Corpus depressum, lutræ corpori quodammodo simile nisi quod multo minus sit, pilo densissime oblitum molli et quasi castoreo, saturatim infuscatur, infra sub-ferrugineo-albet. Caput modice parvum, fere complanatum, rostro (ut supra diximus) anatis cujusdam latirostræ simillimo; ducta orbiculatim circa basin membrana, cujus pars superior æquat

N

lati-

latitudine circiter octavam unciae partem, inferior circa quintam. Cauda depressa, nec minus corpore pilosa, breviuscula et obtusa, latior ad basin, indeque sensim decrescens in apicem fere subbifidum, tres quasi uncias longa, corpori concolor. Longum est totum animal a rostri apice ad extremum caudae tredecim uncias: rostrum unciam cum dimidio. Crura brevissima in pedes late pinnatos desinunt, pinnis anteriorum longe ultra ungues excurrentibus; posteriorum tantum ad bases unguium pertingentibus. Ungues digitis anticis sunt quinque, recti, validi, acuti, duobus exterioribus paulo brevioribus. Posticis sex, longiores, magisque curvati; digito et ungue exteriori quatuor mediis multo brevioribus; ungue interiori seu sexto altius cruri adjuncto, ad instar validi et acuti calcaris. Crura omnia superne pilosa sunt. Pedes anteriores supra infraque nudi: posteriores supra pilosi, subtus nudi. Mandibulae inferioris, quae angustior est superiore, margines interiores striis seu ferraturis plurimis notantur, eodem modo quo rostrum anatis. Nares parvulae, rotundae, distant quasi quadrantem unciae ab extremo rostro, et octavam unciae partem a se invicem. Dentium nulla sunt vestigia. Caret specimen palato, quod ex ore discerptum est; sed quatenus a situ conjicere liceat, probabile est simile fuisse palato anatis. Defuit quoque lingua specimini. Aurium spatio fere semiunciali ab oculis remotarum foramen ovatum, octavam unciae partem latum, pilo occultatur; nulla extrinsecus visibili aure. Oculi sub duabus albis maculis siti sunt non longe a basi rostri. Vivo animali verisimile est eos perexiguos fuisse, fortasse

fortasse etiam subcuticulares; cavitates enim profunde latent sub vellere haud majoris diametri decima unciae parte; unde conjicimus non indulfisse iis Naturam visum clarum et distantia prospectantem, sed illum tantummodo qui talpis et aliis nonnullis ejusmodi quadrupedibus conceditur.

A rostro et pedibus pinnatis non dubitamus Platypum locorum fluvialium esse incolam, in ripis cubile sibi posse effodere, vescique plantis et animalibus aquaticis.

De animali à cæteris adeo insigniter discrepante ut clarissimi Buffoni dictum comprobet, "quicquid possibile sit generari Naturam revera generasse," nihil in præfens habemus quod ulterius proferamus. Plenius innotescet physicis (uti sperare fas est) accurate examinatum in locis natalibus.

Non modo excusatos habemus verum etiam laudatos lectores nostros, si de re insolita et pene incredibili paululum addubitaverint: et fate-mur nosmetipsos oculis nostris vix ac ne vix credidisse. Audacter tamen possumus asserere nos nulla fallaciarum signa detegisse, mandibularumque margines, rictum, omniaque ad rostrum pertinentia, postquam ipsius macerationis periculum in aqua subierant, ut facilius moveri possent, fuisse omnino naturalia, nec peritissimorum anatomicorum acumini vel minimum fraudis vestigium patefcere.

In Australasia generatur Platypus anatinus.

Ipissimum animal penes est Dominum Dobsonum, qui arte anatomica quam in specimina vegetabilia pereleganter exercet merito inclaruit.



Ornithorhynchus anatinus (Linn.)

THE DUCK-BILLED PLATYPUS.



GENERIC CHARACTER.

Mouth shaped like the bill of a Duck.

Feet webbed,

The animal exhibited on the present plate constitutes a new and singular genus, which, in the Linnæan arrangement of Quadrupeds, should be placed in the order *Bruta*, and should stand next to the genus *Myrmecophaga*.

Of all the Mammalia yet known it seems the most extraordinary in its conformation; exhibiting the perfect resemblance of the beak of a Duck engrafted on the head of a quadruped. So accurate is the similitude that, at first view, it naturally excites the idea of some deceptive preparation by artificial means: the very epidermis, proportion, serratures, manner of opening, and other particulars of the beak of a shoveler, or other broad-billed species of duck, presenting themselves to the view: nor is it without the most minute and rigid examination that we can persuade ourselves of its being the real beak or snout of a quadruped.

The body is depressed, and has some resemblance to that of an Otter in miniature: it is covered with
a very

a very thick, soft, and beaver-like fur, and is of a moderately dark brown above, and of a subferruginous white beneath. The head is flattish, and rather small than large: the mouth or snout, as before observed, so exactly resembles that of some broad-billed species of duck that it might be mistaken for such: round the base is a flat, circular membrane, somewhat deeper or wider below than above; viz. below near the fifth of an inch, and above about an eighth. The tail is flat, furry like the body, rather short, and obtuse, with an almost bifid termination: it is broader at the base, and gradually lessens to the tip, and is about three inches in length: its color is similar to that of the body. The length of the whole animal from the tip of the beak to that of the tail is thirteen inches: of the beak an inch and half. The legs are very short, terminating in a broad web, which on the fore-feet extends to a considerable distance beyond the claws; but on the hind-feet reaches no farther than the roots of the claws. On the fore-feet are five claws, straight, strong, and sharp-pointed: the two exterior ones somewhat shorter than the three middle ones. On the hind feet are six claws, longer and more inclining to a curved form than those of the fore-feet: the exterior toe and claw are considerably shorter than the four middle ones: the interior or sixth is seated much higher up than the rest, and resembles a strong, sharp spur. All the legs are hairy above: the fore-feet are naked both above and below; but the hind-feet are hairy above, and naked below. The internal edges of the under mandible, (which is narrower than the upper) are
ferrated



ferrated or channelled with numerous striæ, as in a duck's bill. The nostrils are small and round, and are situated about a quarter of an inch from the tip of the bill, and are about the eighth of an inch distant from each other. There is no appearance of teeth: the palate is removed, but seems to have resembled that of a duck: the tongue also is wanting in the specimen. The ears or auditory foramina are placed about half an inch beyond the eyes: they appear like a pair of oval holes of the eighth of an inch in diameter; there being no external ear. On the upper part of the head, on each side, a little beyond the beak, are situated two smallish, oval, white spots; in the lower part of each of which are imbedded the eyes, or at least the parts allotted to the animal for some kind of vision; for from the thickness of the fur and the smallness of the organs they seem to have been but obscurely calculated for distinct vision, and are probably like those of Moles, and some other animals of that tribe; or perhaps even subcutaneous; the whole apparent diameter of the cavity in which they were placed not exceeding the tenth of an inch.

When we consider the general form of this animal, and particularly its bill and webbed feet, we shall readily perceive that it must be a resident in watery situations; that it has the habits of digging or burrowing in the banks of rivers, or under ground; and that its food consists of aquatic plants and animals. This is all that can at present be reasonably guessed at: future observations, made in its native regions, will, it is hoped, afford us more
ample

HIPPOBOSCA HIRUNDINIS.



CHARACTER GENERICUS.

Os haustello brevi, cylindrico, recto, bivalvi;
valvulis æqualibus.

Antennæ filiformes.

Pedes unguibus pluribus.

Lin. Syst. Nat. Gmel. p. 2904.

CHARACTER SPECIFICUS, &c.

HIPPOBOSCA alis subulatis, pedibus hexadactylis.

Lin. Syst. Nat. p. 1010.

Reaum. inf. 4. t. 11. fig. 1—5.

Schaeff. ic. inf. t. 53. f. 1. 2.

Geoff. inf. par. 2. p. 547. n. 2.

Scop. ent. carn. 1023.

Genus Hippobosca a cæteris omnibus insectis quæ *diptera* vocantur, insigniter differt, et vinculo quodam connectere videtur insecta *diptera* et *aptera*; est enim species, Hippobosca scilicet ovina, quæ alis omnino caret. Generantur præterea Hippoboscæ eodem fere modo quo pleraque aptera. Ex ovo enim permagno, (quod non tam merum ovum quam pupam

ample information, and will make us fully acquainted with the natural history of an animal which differs so widely from all other quadrupeds, and which verifies in a most striking manner the observation of Buffon; viz. that whatever was possible for Nature to produce has actually been produced.

On a subject so extraordinary as the present, a degree of scepticism is not only pardonable, but laudable; and I ought perhaps to acknowledge that I almost doubt the testimony of my own eyes with respect to the structure of this animal's beak; yet must confess that I can perceive no appearance of any deceptive preparation; and the edges of the rictus, the insertion, &c. when tried by the test of maceration in water, so as to render every part completely moveable seem perfectly natural; nor can the most accurate examination of expert anatomists discover any deception in this particular.

The Platypus is a native of Australasia or New Holland, and is at present in the possession of Mr. Dobson, so much distinguished by his exquisite manner of preparing specimens of vegetable anatomy.

pam esse seu chrysalidem notavit Linnæus) erumpere solet insectum plene formatum. In nidis hirundinis *urbicæ* et *rusticæ* Linnæi non modica plerumque est copia hippoboscæ hirundinis; nec raro in ipsis avibus, præsertim in iis quæ non plene adoleverint; quibus non parvam necesse est creent molestiam, non solum magnitudine, sed pedibus ad libitum tenaciter infixis, non duplici tantum ungue, (ut fit in aliis plerisque insectis) sed sex æquali fere longitudine instructis. Motus ei celer est et inæqualis; sæpe etiam retrogradus. Ostenditur in tabula tum vera tum aucta magnitudine.

THE SWALLOW HIPPOBOSCA.



GENERIC CHARACTER.

Mouth consisting of a short, strait, cylindric, bivalve sucker or tube, with equal valves.

Antennæ filiform.

Feet furnished with several claws.

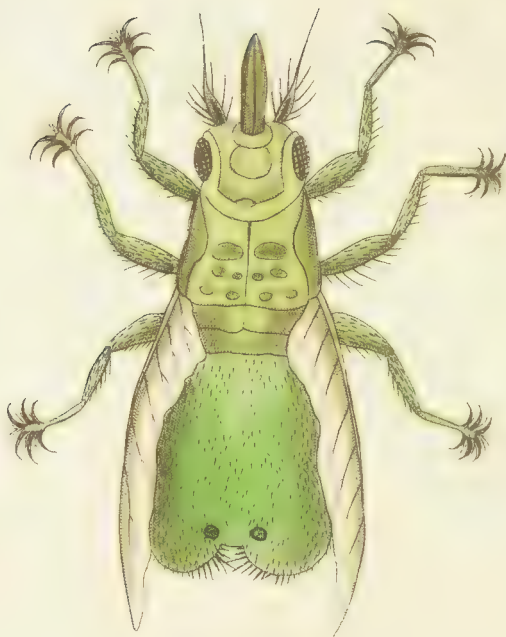
SPECIFIC CHARACTER, &c.

HIPPOBOSCA with sharp wings and six-clawed feet.

The sharp-winged HIPPOBOSCA.

The SWALLOW-FLY.

The genus Hippobosca differs remarkably from all other insects of the dipterous tribe, and seems to form as it were a shade or connecting link between the orders Diptera and Aptera ; one species, the *H. ovina*, (commonly termed the sheep-tick) being entirely destitute of wings. The Hippoboscæ also resemble most of the apterous insects in their mode of production ; the ovum, (which is of uncommon size) enclosing the insect completely formed ; so that, as Linnæus observes, it seems rather a pupa or



or ready-formed chrysalis than an ovum. The *Hippobosca hirundinis* may be generally found in considerable plenty in the nests of Martins and Swallows, and not unfrequently on the birds themselves, especially those which have lately left the nest, or have not attained their full growth. The size of the insect must of necessity render it extremely troublesome to the birds thus infested, to which it is enabled at pleasure to adhere by means of the peculiar conformation of the feet, each of which, in this genus, instead of being furnished with two claws only, as in the generality of insects, is provided with six of nearly equal size. The motions of this insect are quick and irregular, and it frequently moves laterally, and even backwards with great facility. The plate represents it both in its natural size, and as it appears when magnified.

PAPILIO IO.



CHARACTER GENERICUS.

Antennæ apicem versus crassiores, sæpius clavato-capitatae.

Alæ (sedentis) erectæ fursumque conniventes, (volatu diurno.)

Lin. Syst. Nat. p. 744.

CHARACTER SPECIFICUS, &c.

PAPILIO alis angulato-dentatis fulvis nigro-maculatis ; singulis oculo cæruleo.

Lin. Syst. Nat. Gmel. p. 2290.

Nymph. gemmat.

OCULUS pavonis.

Goed. inf. t. 1.

Merian inf. Eur. 1. t. 26.

Roef. inf. 1. t. 3.

Urticas depascitur larva pulcherrimi hujus papilionis ; indeque extrema cauda dependens, ut cernere est in tabula, in chrysalidem convertitur mense Julio ; e qua erumpit papilio incipiente Augusto.



AN.

Publ'd by J. P. Rodder June 1799.

THE PEACOCK BUTTERFLY.



GENERIC CHARACTER.

Antennæ commonly thickening towards the end into a clavated tip.

Wings (when at rest) meeting upwards. (Flight diurnal.)

SPECIFIC CHARACTER, &c.

Orange-brown BUTTERFLY, with angular, dentated wings, spotted with black; with a large blue-shaded eye on each wing.

Alb. inf. pl. 3.

Reaum. inf. 1. t. 25. fig. 1. 2.

Wilk. pap. 55. pl. 3. A. 2.

Harr. avel. pl. 8. f. k. i.

The caterpillar or larva of this most beautiful butterfly feeds on nettles, and commonly changes into a chrysalis in July; hanging by the tail, as expressed in the plate. The Fly appears in the beginning of August.

FALCO PONTICERIANUS.



CHARACTER GENERICUS.

Rostrum aduncum, basi cera instructum.

Caput pennis arcte tectum.

Lingua bifida.

Lin. Syst. Nat. p. 124.

CHARACTER SPECIFICUS, &c.

FALCO castaneus, capite collo pectoreque albis,
cera cærulea, pedibus flavis.

FALCO PONTICERIANUS.

Lath. ind. orn. p. 23.

Lin. Syst. Nat. Gmel. p. 265.

AQUILA PONTICERIANA.

Briss. orn. 2. p. 129.

Milvo vulgari fere æqualis est magnitudine species hæc pulcherrima, quam in variis Indiæ Orientalis partibus generatam quasi sacram veneratur incolarum superstitio. Variare paululum videtur plumarum color; cum in opere cui titulus *Planches Enluminees*, depingantur pectus et abdomen striis parvulis fuscis in longitudinem ductis notata, quarum in specimine quod continet Museum Britannicum, unde delineata est nostra figura, ne minima sunt vestigia.



THE
PONDICHERRY EAGLE.



GENERIC CHARACTER.

Bill hooked ; with a cere or naked skin at the base.

Head thickly beset with feathers.

Tongue generally bifid.

SPECIFIC CHARACTER, &c.

Chestnut-coloured Eagle, with white head neck
and breast, blue cere, and yellow feet.

PONDICHERRY EAGLE.

Lath. syn. 1. p. 41.

AIGLE DE PONDICHERRY.

Buf. ois. 1. p. 136.

Pl. enl. 416.

This elegant species is nearly equal in size to a kite. It is a native of many parts of the East Indies, and is considered as a sacred bird. It appears to vary a little in point of plumage ; the figure given in the *Planches Enluminees* representing it as dashed down the breast and abdomen with small longitudinal streaks of brown ; of which, in the specimen preserved in the British Museum, from which the present figure was drawn, there is not the slightest appearance.

MONOCULUS CONCHACEUS.



CHARACTER GENERICUS.

Pedes natatorii.

Corpus crusta tectum.

Oculi (plerisque) approximati, testæ innati.

CHARACTER SPECIFICUS, &c.

MONOCULUS testâ ovali tomentosa.

Lin. Syst. Nat. Gmel. p. 3003.

M. antennis capillaribus multiplicibus, testâ bivalvi.

Lyn. Syst. Nat. ed. 12. p. 1059.

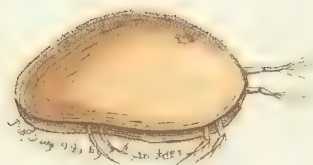
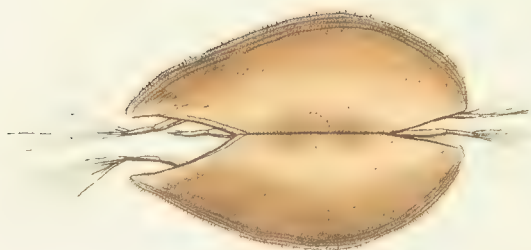
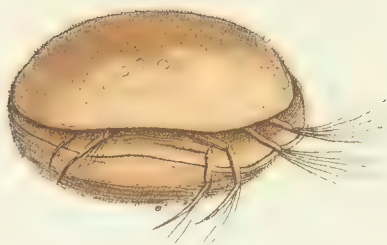
M. ovato-conchaceus.

Degeer. ins. 7. p. 476. t. 29. f. 5—7.

Cypris pubera.

Müll. entomost. p. 56. n. 15. t. 5. f. 1—5.

In omnibus fere aquis stagnantibus conspici possit æstivo tempore Monoculus conchaceus, mytulo deminuto simillimus. Variat moles pro ætate; interdum grano arenæ vix major, interdum decimæ fere uncix parti æqualis. Color, ut plurimum, leviter fuscus, interdum subflavo tinctus.



THE
MUSCLE MONOCULUS.



GENERIC CHARACTER.

Feet formed for swimming.

Body covered by a crustaceous shell.

Eyes (in most species) approximated, fixed in the shell.

SPECIFIC CHARACTER, &c.

Brown oval MONOCULUS, with downy shell.

Oval-shelled MONOCULUS.

Muscle MONOCULUS.

The Monoculus Conchaceus, so remarkable for its resemblance to a muscle in miniature, may be discovered in almost every stagnant water during the summer months. In size it varies according to age; being sometimes scarce larger than a grain of sand, and sometimes nearly the tenth of an inch in length. Its color is a pale brown, with a slight cast of yellow.

FLUSTRA FOLIACEA.



CHARACTER GENERICUS.

Animal Hydra.

Stirps membranacea, foliacea, cellulosa.

CHARACTER SPECIFICUS, &c.

FLUSTRA FOLIACEA ramosa, laciniis cuneiformibus rotundatis.

Lin. Syst. Nat. p. 1300.

Alga marina πλατυκεως porosa.

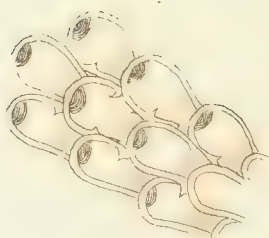
J. Baub. hist. plant. 3. p. 809.

Fucus marinus, &c. telam fericeam textura sua æmulans.

Moris. hist. pl. 3. p. 646. sect. 15. t. 8. f. 16.

Flustram depinximus, quæ adeo accedit ad plantæ similitudinem, ut intuentium oculos facillime possit decipere. Frequens satis est in litoribus Britannicis, adhæretque conchis, rupibus, et aliis multis quæ in mari generantur. Veram magnitudinem ostendit tabula. Mollis ei est substantia, colore fusco-pallidissimo-flavescente.





FOLIACEOUS FLUSTRA.



GENERIC CHARACTER.

Animal Polype-shaped.

Stem foliaceous, membranaceous, cellular.

SPECIFIC CHARACTER, &c.

FOLIACEOUS branchy Flustra, with rounded subdivisions.

Broad-leaved Horn-wrack.

Ell. corall. p. 70.

FOLIACEOUS FLUSTRA, or Leafy Horn-wrack.

The species of Flustra here represented is of an appearance so perfectly resembling that of a vegetable, that it is impossible, at first view, not to suppose it a real plant. It is not uncommon on the British coasts, and is found attached to shells, rocks, and various submarine substances. Its size is as represented in the plate. It is of a soft substance, and its color is an extremely pale yellowish brown.

TUBULARIA INDIVISA.



CHARACTER GENERICUS.

Stirps tubulosa, simplex vel ramosa, basi affixa.

Animal capite tentaculis cristato.

CHARACTER SPECIFICUS, &c.

TUBULARIA culmis simplicissimis, geniculis contortis.

Lin. Syst. Nat. p. 1301.

Corallina TUBULARIA calamos avenaceos referens.

Ell. corall. p. 31. t. 16. f. c.

Adiantum aureum marinum.

Lbwyd. act. angl. 28. p. 275. t. 6. f. 7.

Marina hæc species, tubulariarum Britannicarum maxima, cujus veram magnitudinem ostendit tabula, in variis litoribus nostratibus testis aliisque ejusmodi adhæret. Corpora animalium rubro-pallida : capita phœnicea, tentaculis exterioribus seu majoribus albis, tubis seu receptaculis melinis.



UNDIVIDED TUBULARIA.



GENERIC CHARACTER.

Stem tubular, simple or branched, fixed by the base.

Animal crested with tentacula.

SPECIFIC CHARACTER, &c.

TUBULARIA with simple or undivided stems and twisted joints.

TUBULAR Coralline like oaten pipes.

Ell. corall. p. 31.

Oat-straw TUBULARIA, or Tubular Coralline.

This is the largest of the British Tubulariæ, and is represented on the plate in its natural size. It is a marine species, and is found on several of our coasts, adhering to rocks, shells, &c. The bodies of the animals are of a pale red, the heads of a bright crimson, the larger or exterior tentacula white, and the tubes or receptacles of a straw color.

PLATYPUS.



Quum de Platypo non ita pridem in hoc opere depicto tractaremus, “ non modo excusatos habuimus verum etiam laudatos lectores nostros, si de re infolita et pene incredibili paululum addubitaverint; et fassi sumus nosmet-ipsos oculis nostris vix ac ne vix credidisse.” Qui igitur litem dirimendi pari nobiscum flagrant studio, perlegant quæ annotaverint Pallas, Guldenstedtius, et Lepechinus de Sorice moschato Linnæi, qui aliqua ex parte ad Platypi similitudinem evidenter videtur accedere, quique, licet in nonnullis Europæ regionibus non admodum rarus sit, jejune tamen depictus est, nec (nisi ab auctoribus quos jam memoravimus) satis luculente descriptus. Fatendum quidem est Soricis moschati pedes posteriores multo latius esse pinnatos quam anteriores, quod Platypo contrarium obtigit. Cauda quoque insigniter differt. Certum tamen est Soricem moschatum lepido fallaciarum experimento egregie posse inservire. Decernet in posterum de miro animali diligens et accurata investigatio, quod in præsens dubium sit et controversum necesse est.

PLATYPUS.



In the description of the animal called Platypus, in a preceding number of this publication, I observed that “ a degree of scepticism on a subject so extraordinary was not only pardonable but laudable, and that I almost doubted the testimony of my own eyes with respect to the structure of that animal’s beak.” I therefore recommend to the attention of those who may be equally zealous in the investigation of a point so interesting, the descriptions given by Pallas, Guldensfledt, and Lepechin of an animal, not indeed very rare in some parts of Europe, but which seems to have been hitherto but indifferently figured, and, till lately, but very imperfectly described, viz. the *Sorex moschatus* Lin. In this animal, in some particulars, an evident approach seems to be made to the Platypus ; and though the structure of the feet differs as to exact similitude, there is yet a general resemblance ; except that the authors above mentioned represent the hind feet as much more widely webbed than the fore ; the contrary of which is the case in the Platypus : the tail is also of a widely different appearance. It is undeniable however that no animal would so well answer for an experiment of ingenious deception as the *Sorex moschatus*. Upon the whole this paradoxical quadruped must be left to future investigation, and we must be content at present to remain ignorant of its real nature.

BUCCO BIDENTATUS.



CHARACTER GENERICUS.

Rostrum cultratum, lateraliter compressum, apice
utrinque emarginato, incurvato ; rictu infra
oculos protenso.

Nares penne recumbentibus obtectæ.

Pedes scanforii.

Lin. Syst. Nat. p. 168.

CHARACTER SPECIFICUS, &c.

BUCCO mandibula superiore bidentata.

BUCCO dubius.

Lath. ind. orn. p. 206.

Lin. Syst. Nat. Gmel. p. 409.

Magnitudine naturali tertia fere parte minor de-
pingitur in tabula rarissima avis, Barbariæ incola ;
quæ licet habitu et forma generali *Ramphastis* admo-
dum sit affinis, linguam tamen habet non in pennæ
similitudinem formatam (qualem habent *Ramphasti*)
sed crassam seu carnosam. In Museo Britannico con-
tinetur pulchrum specimen, unde delineata est hæc
nostra figura.



THE
TOOTH-BILLED BARBET.



GENERIC CHARACTER.

Bill wedge-shaped, laterally compressed, incurvated at the tip and emarginated on each side ; the rictus or gape extending beyond the eyes.

Nostrils covered with recumbent feathers.

Feet scanorial.

SPECIFIC CHARACTER, &c.

BARBET with the upper mandible bidentated.

Doubtful BARBET.

Lath. Syn. suppl. p. 96.

Barbican.

Buf. ois. 7. p. 132.

Pl. enl. 602.

This very rare species is a native of Barbary, and is represented about a third part less than its natural size. In general appearance it is extremely allied to the Toucans. The tongue however is not feather-shaped as in those birds, but thick or fleshy. The beautiful specimen here figured is in the British Museum.

PHALANGIUM RENIFORME.



CHARACTER GENERICUS.

Pedes octo.

Oculi verticis duo contigui, duo laterales.

Frons antennis pediformibus.

Abdomen rotundatum.

Lin. Syst. Nat. p. 1028.

CHARACTER SPECIFICUS, &c.

PHALANGIUM brachiis dentatis, pedibus primis longissimis filiformibus, thorace reniformi.

Lin. Syst. Nat. p. 1029.

Tarantula fusca major.

Brown. jam. 409. t. 11. f. 3.

Cancellus araneoides.

Petiv. pteriog. t. 20. f. 12.

Generis Phalangii, araneis admodum affinis, si non pulchritudinem, formam tamen singularem et insolitam datur mirari. Species, cujus vera magnitudo in tabula ostenditur, Americæ partes calidiores incolit, morfu dicta non modo summum dolorem, sed interdum etiam gravia absorpti veneni symptomata excitare.



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Jubd Aug! 99 by J.P. Voder.

THE RENIFORM PHALANGIUM.



GENERIC CHARACTER.

Eight *Legs*.

Two vertical and two lateral *Eyes*.

Antennæ resembling legs.

Abdomen rounded.

SPECIFIC CHARACTER, &c.

PHALANGIUM with the arms dentated ; the
first pair of legs extremely long and filiform ;
the thorax kidney-shaped.

Great Brown PHALANGIUM.

The genus Phalangium, nearly allied to that of Aranea, is much more remarkable for the singularity than the beauty of its appearance. The present species, which the plate represents in its natural size, is a native of the hotter regions of America, and is said to be of a dangerous nature ; the bite exciting not only severe pain, but, in some instances, producing the most alarming symptoms of poison.

BRACHIONUS URCEOLARIS.



CHARACTER GENERICUS.

Corpus contractile, testa tectum, ciliis rotatoriis.

Lin. Syst. Nat. Gmel. p. 3872.

CHARACTER SPECIFICUS, &c.

BRACHIONUS testa apice multidentata, basi mutica, cauda simplici.

Lin. Syst. Nat. Gmel. p. 3872.

BRACHIONUS capsularis, testa ovata, apice sexdentata, basi incisa, cauda longa bicuspi.

Müll. anim. inf. p. 356. t. 50. f. 15—21.

Vorticella urceolaris.

Lin. Syst. Nat. ed. 12. p. 1319.

In stagnis Britannicis æstivo tempore non raro conspectus Brachionus urceolaris, affinis admodum est Brachiono Bakeriano Mülleri, qui in præcellenti opere de animalculis infusoriis ambas species depingi curavit. Ob abundantiam Brachionorum interdum quasi pellicula induuntur aquæ obscure rubente seu ferruginea. Superat magnitudine hæc species ple-rosque congeneres; in guttula puræ aquæ imposita nudo oculo visibilis. Manifesti sunt ovorum racemi
sub

sub tempus generationis. Animalculum primus dilucide descripsisse videtur ingeniosus Henricus Bakerus, qui in opere cui titulus "Employment for the Microscope," iconem exculpi curavit, fidam satis, parum tamen elegantem. Color generalis fusco-rufescit.

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Illustration 195, by J. H. Nodder

THE
BELL-SHAPED BRACHIONUS.



GENERIC CHARACTER.

Body contractile, enclosed in a shell, and furnished at the head with rotatory organs.

SPECIFIC CHARACTER, &c.

BELL-SHAPED BRACHIONUS, with the shell divided into several teeth at the top ; rounded at bottom ; the tail long and bifid at the tip.

The Bell BRACHIONUS.

Tooth-shelled BRACHIONUS.

This species, which is by no means uncommon in the stagnant waters of England during the summer months, is extremely nearly allied to the *Brachionus Bakeri* of Müller, who in his admirable work on the animalcula infusoria has given figures of both. The *Brachioni* are sometimes so numerous as to form on the surface of the water a scum of a deep dusky red or ferruginous color. The size of the *B. urceolaris* exceeds that of many others of this genus ; being such as to render it visible to the naked eye, when placed in a drop of clear water. The ovaries
or

or clusters of spawn in the breeding season are extremely conspicuous. This animalcule seems to have been first distinctly described by the ingenious Mr. Henry Baker, who in his work entitled *Employment for the Microscope* has given a figure sufficiently exact to determine the species, though not remarkable for its elegance. Its general color is a reddish brown.

CONUS AULICUS.



CHARACTER GENERICUS.

Animal Limax.

Testa univalvis, convoluta, turbinata.

Apertura effusa, longitudinalis, linearis, edentula,
basi integra.

Columella lævis.

CHARACTER SPECIFICUS, &c.

CONUS testa venis reticulatis fasciisque longitu-
dinalibus fuscis interruptis.

Lin. Syst. Nat. p. 1171.

Seb. Mus. t. 47. fig. 10—12.

Knorr. vergn. 2. t. 1. f. 1—3. et. 3. t. 19. f. 1.

Regenf. conch. 1. t. 8. f. 25.

Born. mus. Caes. Vind. test. t. 7. f. 14.

In mari Indico præcipue reperta fedem sibi jure
vindicat hæc cochlea interpulcherrimas sui generis.
Colore interdum variat ; notas tamen semper retinet
certas adeo et constantes, ut de specie vix possit du-
bitari.



THE PORPHYRY CONE.



GENERIC CHARACTER.

Animal resembling a Limax or Slug.

Shell more or less conic or pyramidal.

Aperture longitudinal, linear, without teeth, entire at the base.

Pillar smooth.

SPECIFIC CHARACTER, &c.

White CONE, with brown reticular veins and longitudinal bands.

Heart-spotted CONE.

Porphyry CONE.

This shell, which is principally found in the Indian ocean, may justly be considered as one of the most beautiful of its genus: in color it sometimes varies, but commonly retains characters so well marked as hardly to admit of a doubt as to the species.

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